

April 1991

The National Locksmith[®]



Door Hardware Issue

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*Click on the article
you wish to read*



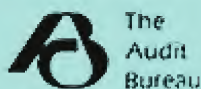
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Products from the following companies are featured: (in alphabetical order) Abloy Security Inc.; Arrow Lock Company; Keri Systems, Inc.; LCN Closers; Lori Corp.; M.A.G. Engineering and Mfg.; Medeco Security Locks; Inc.; Rofu International; Sargent & Company; Security Door Controls; Trine Products.

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Commentary

Confidence Begins To Climb

Recently, President Bush addressed the nation and told us that the war in the Persian Gulf was over. In a few short weeks, we won "the mother of all battles" and now the armed forces are starting to come home. That was very welcome news to everyone. We are grateful that the war did not last longer and that casualties were light. But we remember that not all of our soldiers will be boarding boats and planes to return. The cost of this victory was measured in blood, and we must continue to honor those who made sacrifices to serve their country.

The war's end already seems to have boosted the confidence of Americans about the future. Although we do not yet know if the end to our current recession is here, many people feel better about the prospects for an improved economy. When consumer confidence makes a big comeback as it seems to be doing, then folks feel better about purchasing things with their hard earned money.

Simply stated, when your retail and commercial customers feel good enough about their own economics, they will feel free to invest in more lock work, masterkeying, etc. Then, of course, you'll begin to feel good enough about your business to order more key blanks, locks, tools, machines, etc. That, I think, is how recovery works. The wholesalers will order more for stock; the manufacturers step up production to meet demand; and the workers feel secure enough to begin buying clothes, cars and houses.

We may have more lean times to get through in the months ahead. But I like to think that a full blown booming economy is just around the corner for all of us. Remember, every month that you get through brings you one month closer to prosperity. Take steps now to insure that your business is in a good position to benefit from the recovery which is sure to follow.

Make an effort to touch base with customers, both previous and current. Promote your services with regular mailings to people and companies who can use your expertise to secure their lives and property. At 29¢, a stamp is still a bargain to mail a letter. Want to mail even cheaper? Send post cards for only 15¢. For a very small expense, you can order post cards to be printed with your advertising message. If you mail out only five each business day, your weekly postage costs only \$3.75. Yet you reached out to 25 potential customers. In a year, that's 1200 contacts. You may wish to do more (or less), but its good business to remind your customer that he should

be thinking about maintaining his security at this time.

Another method you can use to pick up more business is to get out and meet your customer on his home turf. Spend at least an afternoon a week popping in on property managers, motel management, commercial locations, and so forth. Remember, "sales" is not a four letter word. It will certainly bring you more business to become active in your local Chamber of Commerce where you can meet local business people. Next time they need security, they'll call upon you.

Recovery and a booming economy are coming. It's just a matter of time. Will you be ready to take advantage of the good times?

We are extending the deadline for you to send in your entries to our photo contest. Originally, we stated that you had until April 15th to get your pictures here. We are giving you an additional thirty days...until May 15th. Send us your photos in any or all of these categories: your shop (inside view), your shop (outside view), your service vehicle inside and/or out. Send the photos to Photo Contest, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107. Remember, All-Lock is offering hundreds of dollars in prizes.

See page 59 for details on how to order 1991 updates for your code books from *The National Locksmith*.



Marc Goldberg
Editor/Publisher

Month 5

Letters

Comments, Suggestions and Criticisms

The National Locksmith is interested in your view. We do reserve the right to edit for clarity and length. Please address your comments, praise, or criticism to Editor, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107. All letters to the editor must be signed.

1990 Technitips Winner Appreciates Prize

Dear Marc:

I received the Key Machine as my Technitips prize and I sure do thank you for it. I have never seen one that operated like it. Thank you so much.

Juanita Ramsey
Texas

Contest Winner Congratulates All

Dear Marc:

I would like to thank you and *The National Locksmith* for choosing me as the fifth place winner of the 1990 Technitips contest. To be chosen a monthly winner is an honor in itself, but to be chosen fifth from among all those great tips is really something.

I would also like to congratulate Mr. O'Dwyer for winning first place, and

thanks to all the other locksmiths who over the years took the time and effort to send their tips to *The National Locksmith*. Many of those tips have helped me over the years.

I received the HPC 9120RM key machine, and it is really a great machine. The people at HPC really know how to put a machine together. It's the perfect machine for the mobile locksmith.

The Technitips section is the first place I turn to when I receive your magazine. Mr. Sieveking and *The National Locksmith* are doing a great job.

Again I thank you, and I'm looking forward to your next issue.

Lawrence Mazzelli
New York

Legal Advice About Decals in Phonebooks

Dear Marc:

My letter is in reference to a Technitip that was in *The National Locksmith*. A locksmith suggested placing advertising decals on the phone directories and on phone booths. This is not a good idea. If someone is not smart enough to understand why, I suggest they call a competent attorney and the phone company before doing this. The phone company owns the books and the

booths.

Let's use common sense. Do you think the phone company likes this practice? Act like a professional and never, ever, place a decal on another locksmith's ad. The last person to do this was taken to court and paid dearly for doing it.

Also, I have noticed a trend to copy other locksmith's Business names; (i.e.; adding a letter to the name or AAAAA, one or two more "A's" than the other ad). If you are ever taken to court for this, you will lose. Don't open yourself up to civil suits from the phone company or other businesses.

R.A. Ingeman
California

ESP Updates Hon File Cabinet Locks

Dear Marc:

ESP Corporation, the manufacturer of original equipment Hon Company file cabinet locks, announces Hon has made hardware changes that will effect the locksmith servicing Hon file cabinets.

Hon recently changed to a thinner connecting rod inside their cabinets and changed to a narrower slot width on their original equipment file cabinet

Continued on page 8

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lock with machine screw application, ESP replacement part #1750S312, to accommodate this new rod. The slot width has changed from .156 to .085. Newer style replacement locks with the .085 slot will not work in the older cabinets using the wider .156 rod.

To service old style Hone cabinets ESP recommends using their original equipment Anderson Hickey file cabinet lock, ESP no. 1750S500. This lock is made with the .156 width dimension and the deeper .500 slot length on this lock does not affect how the lock works. The Anderson Hickey roll pin lock, ESP no. 1750P500, will also work on Hon cabinets.

This change does not affect the slot width of the Hon roll pin replacement lock, ESP no. 1750P312, which still has a .156 slot width.

ESP Corp.
Massachusetts

"Lady Locksmith" Relates To Sara Probasco

Dear Marc:

Sara Probasco's article is always one of the first ones I turn to when our new magazine arrives each month. My husband and I have, both, had a lot of fun reading and laughing about your recent articles on "Lady Locksmiths." So many of your comments ring true to us.

When I married Bill, I was a Bio-Med Tech in a hospital. Bill was a locksmith. Each of us admired the other's ability to do the things they did. Chauvinistic is not a word that you could ever use to describe Bill, but customers are another story.

About two years ago, we decided to pool our talents and open a locksmith shop. All of a sudden, I was a student again and this time the teacher was my husband. When I was learning his trade from exposure and curiosity he was a lot more tolerant of mistakes.

Now I was doing real work for real customers. I felt pressured by his demands that I study technical manuals, and tear the same lock apart six times just to make sure I knew what I was doing. Now I run the shop and he runs the outside and it's great. When he is out most of the day, we miss each

other's company.

Business is great and we are on the verge of enlarging our shop. I have a lot of cute signs in the shop that our customers comment on and laugh about. We look forward to reading what Sara has to say in the future.

Carol Patterson
Texas

Locksmith Seeks Methods Preventing Police Openings

Dear Marc:

Are you aware of any successful methods that locksmiths across the country may have used to stop law enforcement agencies from opening automobiles, and put this service back in the hand of private business?

I have no objection to police opening a vehicle in a "true emergency" situation such as a child or animal locked in the vehicle, especially when the engine is running or during extremely hot weather. I also have no objection to police performing openings when no professional service is available, but I do object to police performing routine openings when a certified locksmith is available in the area.

Jeff Reilly
Washington

Editor's Note: A costly lawsuit was filed against the police and was won in your state by locksmith Donald Outhet. However, I believe the outcome affected only his local police department. Short of filing an expensive suit, work the political angle first. Organize locksmiths in your area to petition your town council. Complaining directly to the police rarely gets results.



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Technitips

Helpful Hints from Fellow Locksmiths



Send me your Technitips. Who knows, you may be our next winner! c/o The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107

by Robert Sieveking

Another month has slipped through the pages of time and here we are. Spring is just a few days off. Some businesses are up and some down. How did yours make the grade?

Thank-you, to all those who sent in Technitips this month. What you contribute to this column, and the locksmith trade in general, is that invisible product that only you can give. The benefit of your experience.

Congratulations to all those who find their Technitips printed this month. It was a pleasure to hear from you. I found a few Tips this month that sound pretty interesting. I hope you find some new ideas, or at least a new perspective on an old idea. If you have a method or idea that you find especially useful in your business, send it to The National

Win a VATS Decoder From All-Lock!

Each month, All-Lock will award one of their A-7000 VATS Decoders and an A-7001 Adaptor to the best automotive Technitip submitted this month. If you would like a chance to win a free decoder and adaptor from All-Lock, simply submit your automotive tip exclusively to *The National Locksmith*. Tips submitted to other publications cannot be considered.

All-Lock's A-7000 makes it easy to diagnose system failures, service the column and select the correct key blank. This sophisticated tool is easy to use and is completely portable. Long wire leads are easy to use in cramped automotive situations.

Submit your tip, and win today!



Locksmith, attention technical editor, and I'll see that it is considered for this year's Technitip contest. Please try to explain the Tip well enough that someone else can duplicate the method. Photos or illustrations are a big help.

April's Best Tip

Under dial drilling is the preferred

method of opening many locked safes, but it requires a very small emergency dial be used after the original has been pulled. The emergency dial must be small enough to allow the safeman to peer through the drilled hole as the wheels

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How To Enter

All you need to do to enter is submit a tip, covering any aspect of locksmithing to *The National Locksmith*. Certainly, you have a favorite way of doing things that you'd like to share with other locksmiths. Why not write it down and submit it to: Robert Sieveking, Technitips' Editor, *The National Locksmith*, 1533 Burgundy Parkway, Streamwood, IL 60107.

Tips submitted to other industry publications will **not** be eligible! So get busy and send in your tips today. You may win cash merchandise, or even one of many key machines or code book sets! At the end of the year, we choose the winners of the listed prizes.

Last year dozens of people walked off with money and prizes. Wouldn't you like to be one of the prize winners for 1991? Enter today! It's a lot easier than you think!

Every Tip Wins 'Locksmith Bucks!'

Yes, every tip published wins a prize. But remember, you must submit your tip to *The National Locksmith* exclusively. Each and every tip published in Technitips wins you \$25.00 in Locksmith Bucks! Use this spendable cash toward the purchase of any books or merchandise from *The National Locksmith*. You also receive a Bonded Locksmith bumper sticker and decal. Plus you are now eligible for the really big prizes!

Best Tip of the month prizes!

If your tip is chosen as the best tip of the month, you will win \$50.00 in cash as well as \$35.00 in Locksmith Bucks! Plus you will receive a quartz Locksmith watch, a Bonded Locksmith bumper sticker, decal and a Locksmith Cap. Plus, you may win one of the annual prizes.

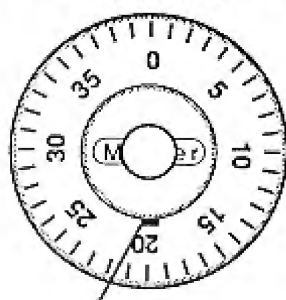
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are positioned. A fine solution to the need for a small dial is as close as the old junk box. Combination padlocks by Master have a nice metal dial. Though it is only a 40 number dial, it is perfect for the application because of its solid metal nose.

Find at least three old Master padlocks, with good dials. Grip the metal nose of the dial in a good vise and pry up on the padlock body. The splined spindle shaft of the padlock will pull out of the dial, leaving the dial in the vise. Pry up on both sides of the padlock evenly and at the same time, applying pressure to the body of the lock only. This will avoid damage to the dial.

The next step is to drill the appropriate hole in the center of each dial. Clamp the dial carefully in a drill press vise, to insure that the drilled hole will be perpendicular to the dial. Drill one dial 1/4," one 5/16," and one 3/8," as you see in illustration one. At least 90 percent of the safes you will be called on to service will use one of the three hole sizes. The last step is to drill and tap each dial to accept a 6-32 or 8-32 set screw, as shown in the illustration. The set screw will secure the dial to the spindle shaft after the safe has been drilled.

MINI EMERGENCY DIAL



6-32 SET SCREW

Illustration 1

Though this dial is not a 100 number dial, it works just fine for transferring the gates to any desired position or just aligning them under the fence. A thin coat of black lacquer and a little white stick paint (lacquer stick, engravers stick paint, or Cal-Custom tire lettering paint crayon) will make the dials look like new.

A second tip involves a quick solution to a lost combination on the Corbin Sesamee keyless padlock.

Refer to illustration two and follow along.

Drill a 1/16" hole, as you see, between the first and second combination wheels and just below the second "s" in Sesamee. You will enter the lock case just above the left most finger of the locking plate. There are four fingers on the locking plate, each to the right of a wheel, with the padlock as you see it in the illustration. Penetrate the brass case of the padlock only. Do not drill into the lockplate finger. With a small probe or wire tool, put pressure on the lock plate finger as you depress the lock shackle. The shackle must be depressed to allow the lock plate finger to "try" the combination wheels.

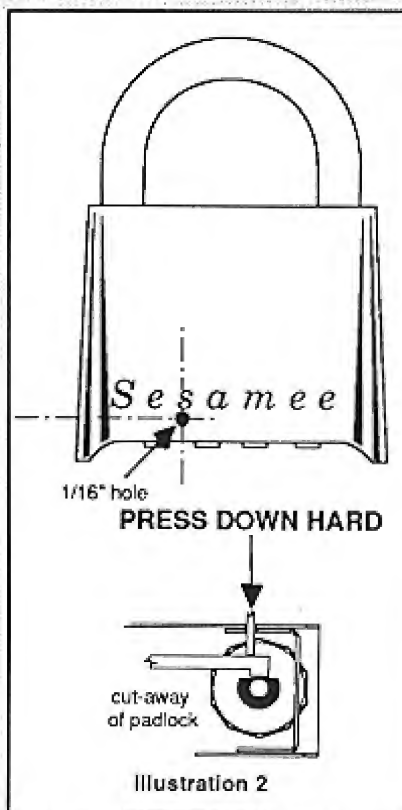


Illustration 2

Maintaining pressure on the lock plate finger, with the probe, rotate the first and second wheels of the combination. You will feel the resistance of the finger on the hub of the combination wheel. Rotate the wheel until you feel the "free" space. This will be the gate and true number of the wheel. As soon as you find the free spot in a wheel, go to the next wheel to the right. As you rotate the fourth wheel to find the last number of the combination, you will feel a definite drop in the finger of the lock plate, as the lock is unlocked. Release the shackle pressure, and it

should pop up.

Two important points about this method; first you must maintain pressure on the shackle to release the lock plate, allowing it to "try" the wheels, and second you must work from one side to the other. A hole between the second and third wheels, to apply pressure to the lock plate, will not work.

After the combination has been found and the lock opened, the hole can be repaired by using a brass screw or short tapered brass pin. File and sand the plug to match the finish of the padlock. Be careful not to make the plug too long, as it will interfere with the proper operation of the lock.

William O'Dwyer
Connecticut

Automotive Tip of the Month

This tip is the winner of the All-Lock A-7000 VATS Decoder and the A7001 Adapter. All-Lock will award this package to the best automotive tip each month of the year.

This little Technitip will save you the need to replace a Ford 10 wafer ignition lock if you are called to recombine or make a key from the wafers. Since I use the method of removing the wafer springs and "rapping" the lock to the open position to remove and make a first key for this lock, it is always necessary to remove the spring retainer to decode the wafers and replace the wafer springs. It is for this reason that the removal and replacement of the spring retainer has become a skill to be mastered. With a little care and some hints on what does and does not work, anyone can do it.

As you know, B&S retainers are not the same as the All-Lock retainers, and cannot be substituted. Briggs has not made the retainers available, I believe, because they feel that the ignition should not be a repairable item.

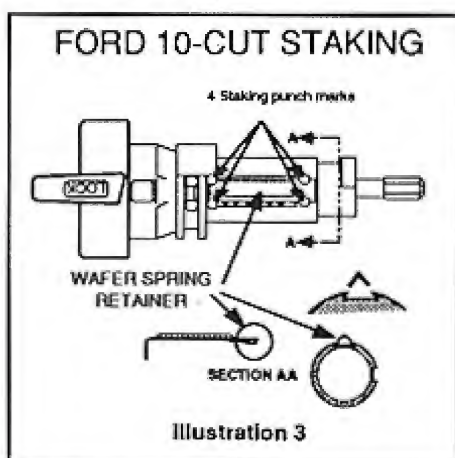
Removing the retainer in such a way that the same retainer can be used a second time, without damaging the lock plug to a point that the staking cannot be "re-set" to retain the spring retainer can be a real trick.

To remove the retainer, without disturbing the factory staking, you must use a very sharp "scriber point." An ice

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pick, or awl that you might use to start screws will not work. Tap the scribe point from the rear of the lock plug, under the spring retainer. The retainer will bow up, to free itself from the factory staking, as you see in illustration three. Do not lift and bend the retainer at this point.



Slide a small flat blade screwdriver under the retainer, from the rear of the lock plug, toward the front. The screwdriver must be as close as possible to the front of the retainer. Turn the screwdriver gently, rocking the

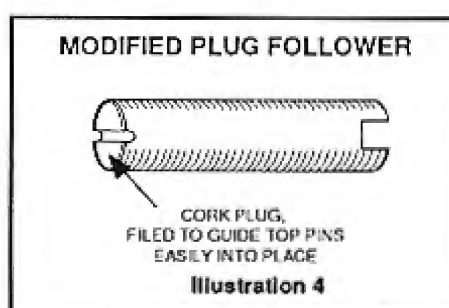
tip from side to side to free the front of the retainer from the staking. If you get too rough here, you will tear the metal of the retainer and leave the tab, which holds the front down, in the plug. Just be gentle, and it will work every time.

With the retainer out of the lock, you can remove and decode the wafers. Replace the wafers in the correct order and replace the wafer springs with All-Lock wafer springs. Crimp the rear of the retainer as you see in the illustration to enter the rear "dove-tail groove." Install the retainer and stake the front in position with a 1/8" round pin punch. Don't just whack the punch, to flatten the white metal down. "Iron" it down carefully, with light tapping. Set the rear of the retainer by "ironing" the retainer flat inside the dove-tail groove. This Technitip is easy, if you're careful.

Bob De Weese
Maryland

It seems that some of the plug followers you buy these days are completely hollow. In order to fit a particular plug properly, this is sometimes the easiest method of

manufacturing these followers. To some locksmiths, this presents a problem, especially if you are loading top pins. I find it easier if the follower has a solid end, grooved to guide the pins and springs into individual cells. That is why I modified several of my special hollow followers as you see in illustration four.



By trimming and forcing a piece of cork into the unused/blank end of the follower, then filing a round groove in the end, it will cradle and center the top pin as it is loaded into the cell. If you need to remove the cork, for some reason, it can be easily pushed out from the opposite end.

Larry Wright
South Carolina



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Here's an easy tip for a Mercedes Benz' with keys locked in the trunk. So far this method has worked for 190E, 500SEC, 240D and 300SD. The only models it won't work on are the sports cars.

The first-aid kit, located behind the rear seat comes out. With a little careful bending (the kit well is made of thin plastic), it will snap out, allowing access to the trunk area. Located and remove the keys. Use extreme caution if you must open the trunk lid by removing the latch with long extension sockets.

Removing the 8mm screws will loosen the latch from the rear deck lid, but the linkage from the vacuum lock/unlock solenoid and sometimes a plastic housing stabilizer pin will retain the latch in the lid. If you remove the two attachment screws and pull up the deck lid you will surely break or severely damage something.

Howard Borders
California

This Tip is for when you have to pull a steering wheel to repair, make a key, or just replace the lock.

If you are like me, you have all the different size bolts in the same tool box or whatever you carry them in, and they are always mixed up. When you find one that fits the steering wheel, you almost always have to look through all the rest to find the mate at the bottom of the box.

What I've done, is paint the head of each bolt pair, so they can be easily located, regardless of the mess my tool box is in. Like red for one size, green for the next, and blue for metric. Each size has its own color. Now, when I get to the job, I know that "blue" fits the GM steering wheel, "green" fits Ford, and AMC has another color. Finding puller bolt pairs is a snap when you have colored bolts.

Leroy Gramza
Michigan

This is a simple Technitip that saves a little time and that I have never seen printed anywhere. Most of the popular deadbolt cylinders have plugs that are held in by a round retainer threaded to the back and held from turning by a pin. If the retainer is too loose or too tight, the key will not operate the cylinder

properly or pull from the plug easily. Before removing the retainer to recombine a cylinder, I scratch a small mark on the retainer, to indicate the pin's original location. After servicing the cylinder, the retainer can be threaded onto the plug and the mark aligned with the retaining pin. This positions the retainer in the exact same position as it was when you began the service.

Neil Matheson
Massachusetts

Editor's Note: Thread the plug retaining nut onto the plug, until it is snug, then back it off two notches. This will position the retainer with the proper amount of clearance to allow the cylinder to operate freely. This "adjustment" of the plug retainer can be used to take up for wear in the plug. If you are having problems with Schlage knob cylinders after they are recombined, check to make sure you have not reversed the cylinder and inserted the plug from the wrong direction. Sometimes this reversal will not cause a serious problem, and sometimes it will make the "key pull" difficult.

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This Technitip concerns the method I use to keep my "inventory cost" handy. Sometimes you may be accidentally giving your customers a better deal on a particular item than your wholesaler gave you. We all reduce a priced item now and then to get it off the floor, but with so many items it can be a problem remembering exactly what you paid for an item you purchased two or three years ago. When counting inventory at tax time you need to be able to tell what your investment in an item is, without wasting time looking through old catalogs and

invoices.

For simplicity, I code my locks with: the company I bought it from, the price I paid for it, and the date it was purchased. For example, "HO26500 11/8" would be for an item purchased from Hans Johnsen, at \$265.00, in November (11) of '88 (or was that 78?) Anyway, then I put the price I sell the item for on the opposite side of the same tag. When I count inventory at the end of the year, I don't have to guess what I paid for each item, and when I'm wheelin' and dealin' with some customer, I can tell at a glance where the profit ends and the loss begins.

Juanita Ramsey
Texas

Editor's Note: Use a "letter cypher," rather than a "plain code," to mark your goods. The system is the same, but the cypher will prevent your regular customers from reading the code and knowing how old your stock is or what your profit would be. Example: LOCKSMITHY=1-2-3-4-5-6-7-8-9-0. "L" is 1, "O" is 2, "C" is 3, "Y" is 0 etc. (or PROFITABLE)

Here is a Technitip that will save you a bit of time when you're called to recombine master keyed cylinders.

Unless the system was designed with a master key having all the deepest cuts, you will need a way of removing the master wafers without dropping the top pins. With the knowledge that the cuts of each key are different, and the master cuts remain constant throughout the system, I have discovered a quick method of removing the master wafers of each cylinder without disturbing the top pins.

To make the master wafer removal key for any specific cylinder, place the master key in the pattern side of your key duplicator and the set key for the cylinder you are disassembling in the cutting side of the duplicator. Duplicate the master key over the set key to generate a key containing all the deepest cuts for that cylinder. You will note that this key will only remove the master wafers for the cylinder that was keyed to the set key. If the system was properly designed, the key will not operate any other cylinders. Do this as you disassemble the cylinders, as the old set keys are of no use in the new system. This Technitip is very helpful when rekeying Almont rekeyable padlocks.

Don Rinkor
California

Editor's Note: This Tip is for use in systems that are otherwise in perfect working order. Many people try to "cheap-out" on their service by not inspecting or servicing the top pins of a cylinder. Weak and crushed springs, grit and old WD-40 type varnish and sludge remain in the cylinder after the recombination, to cause the new keys to work erratically.

No matter how well you rekey the plug, if the top pins are slugging the job will be judged poor, at best. Master wafers that were missed the last time the cylinder was serviced will remain in the cylinder because the top pins were



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not removed when the cylinder was serviced. This allows the possibility for phantom keys to operate the newly recombined cylinder. Most shops charge at least an extra dollar to combinate or service a master keyed cylinder. Earn your money, "do a good job."

1. Drop those top pins and replace the springs if they have become weak or lost their proper tension.

2. Run the plug across the soft wire brush on your key machine, to clean and polish the surface.

3. Use a good quality spray lubricant to clean the cylinder.

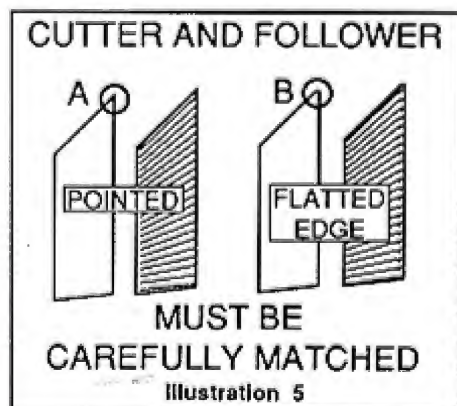
4. Use the corner of a cloth shop towel to wipe out the "inside" of the cylinder.

5. Lubricate the plug with a "little" dry graphite.

Two things make the difference between a professional locksmith and the boy that keys locks in a hardware store. The first difference is that your reputation leaves the shop with every cylinder you key. The second is that, if you have completed a standard course in professional locksmithing and been certified by an accredited school, you know what's right and what isn't. Poor or sloppy service is never profitable.

After changing the cutter on my key machine, I began having difficulty duplicating GM and a few other keys, especially if they had a deep cut followed by a shallow cut.

Close inspection revealed that the cutters I had sent to be resharpened, had returned with a slightly different shape. They had a flat on the edge, as you see in figure "B" of illustration five. The original shape of the cutter was, as figure "A" shows pointed or sharp on the edge.



To solve this problem, it was necessary to reshape the tracer point or follower to match the cutter. A template

for shaping the tracer point can be easily made by doing a plunge cut into a flat key blank. Remove this pattern key to the opposite key vise and use the cut-out portion to gauge the shaping of the tracer point. Because the tracer will be hardened, it is recommended that you grind rather than file the tracer to fit the gauge key.

Norman D. Chance
Illinois

Editor's Note: An alternate and much preferred method to all this, would be to replace the cutter with a

new one of the correct profile to match the existing tracer, or send your cutters to a cutter grinder or service that is familiar with the needs of the locksmith trade.

In our shop we do a lot of "keying-up of American padlocks series 5200 and P500. Our shop is just outside the Ft. Campbell, KY gate. The US Army uses an abundance of 5200 series padlocks.

I was out on a call rekeying a local car lot, which had three 5200 series locks on each gate. You guessed it, my follower was back in the shop with the other keying kit. I had the second keying kit, but the American lock follower is so small and unique I dreaded the thought of going back to the shop.

Solution? Easy, just take one of the spare key cylinder plugs and pull it from the cylinder housing and match the end to the plug you want to rekey. All you have to do is keep all the pin holes from both plugs at 3 and 9 o'clock to the top pins. Now I keep my spare plugs in my van kit, and don't worry about the shop follower.

Anthony Rucci
Kentucky



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Newsmakers

New Products and Industry News

Lucky Line's Magnetic Key Hider

In addition to the number 910 Key Hider, Lucky Line now stocks a Jumbo Magnetic Key Hider, No. 912. Designed for today's extra large keys, it measures an inch longer at 4" x 1-7/8" x 5/8".

Its two extra-strong magnets are specially placed to give this unit amazing gripping power on automobiles, RVs, or any steel surface. The 912 is made of rugged black plastic to withstand abuse and prevent rusting.



Circle 327 on Rapid Reply

Mayflower Expands Operating Space

Mayflower Sales is proud to announce that it has recently expanded its operating space through the acquisition of an adjoining building. According to Brian O'Dowd, manager of Mayflower Sales, "This move demonstrates our confidence in the future despite the current recession. The additional space will increase the size of our existing warehouse by over 125%."

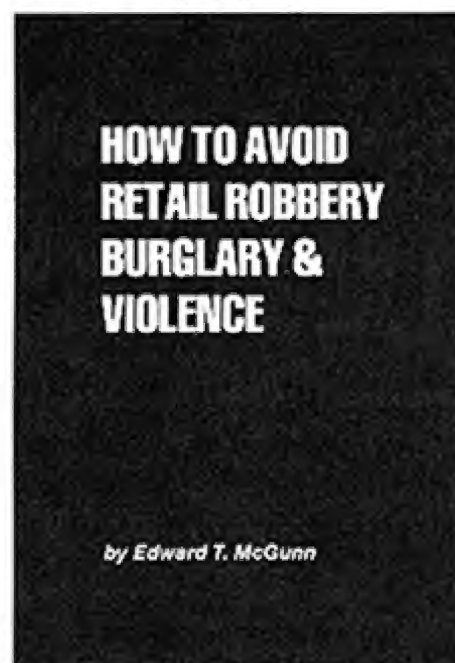
Mayflower continues to position itself for future growth through greater depth of inventory, service and support. Over the coming months, you can expect to see increases in efficiency and inventory availability.

Circle 328 on Rapid Reply

McGunn Offers Free Reference Book

An 18 page Book, *How to Avoid Retail Robbery, Burglary and Violence*, is available free of charge from the McGunn Safe Company, Chicago, Illinois.

This book contains important steps on how to avoid robbery and violence, and what to do after a robber leaves. Included are recommendations on how to minimize employee theft, and precautions to take to avoid burglary. Written in the interest of saving lives and property, the book has easy-to-read charts, graphs, descriptive photos and a valuable bibliography.

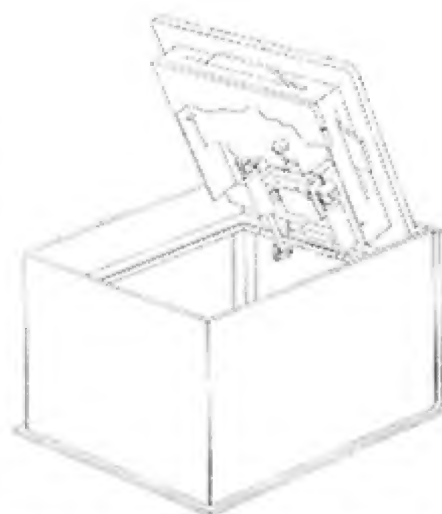


Circle 329 on Rapid Reply

Eclipse Floor Safe's Rota-Bolt Line

Introducing the Eclipse floor safe line, the Rota-Bolt. The Rota-Bolt is a specially designed floor safe which has a flat rotating bolt plate with one moving component and three-way boltwork.

Some of the features of the Rota-



Bolt are hardplate protecting the lock, break-away dual shouldered handle, larger door opening, heavy-duty shock for easier opening, drive-resistant door jams, and it's American made.

The Rota-Bolt is offered in four convenient sizes and in both the 1/2" and 1" doors.

Circle 330 on Rapid Reply

DOM Introduces New Pin Kit

DOM Security Locks announces its new pin kit to service the complete line of commercial furniture locks. DOM's European standard of quality for over 25 years includes over 1500 lock styles and up to 3000 master key capabilities without cross keying.

Cam locks are available with or without captive key feature, and gang locks are our specialty.



Circle 331 on Rapid Reply

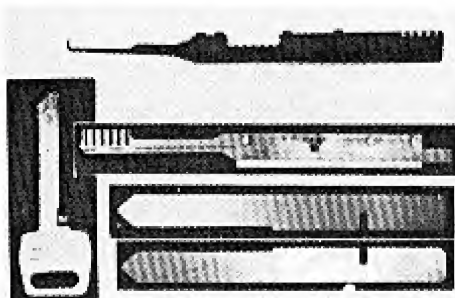
Continued on page 22

Continued from page 20

R & D Adds Decoder To Ford Side-Bar Pickset

The R & D Tool Company is proud to announce an addition of a decoder Ford pickset. Current owners of the Ford pickset can purchase the decoder at a discount off the retail price.

One advantage to the decoder is that it simplifies the decoding process of the Ford ignition, and allows you to pick the ignition to check the "health" of the car before starting to work. You can fit a first key without removing the air bag, and get six of the ten cuts for the ignition.



AWI's Quarterback Rebate Program

AWI has introduced the AWI Quarterback Rebate. This program is a rebate of \$.25 for each proof-of-purchase returned to the factory. The rebate applies to all mortise, rim, thumbturn, dummy, and Convert-A-Lock key in knob style cylinders.

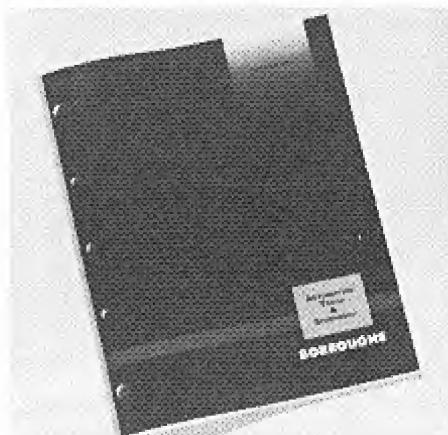
A company spokesperson states, "We just wanted to do a little something for our fine locksmith customers who have been loyal to our products over the years. We also wanted the industry to know that 1991 marks the 25th. year AWI cylinders have been in the marketplace."



Lock and Steering Tools From Borroughs

Borroughs Tool and Equipment Corporation, is offering their Automotive Tools and Equipment Catalog to locksmiths. The catalog is free, and contains eight pages covering the extensive line of specialty tools for locksmiths available from the manufacturer.

The Lock and Steering Section features the VATS Interrogator, Stramer Connector Kit, and other new tools for servicing the latest car models.



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Continued from page 22

Russwin Introduces an Exit Device Parts Manual

Russwin Architectural Hardware has introduced the first in a newly designed series of product parts manuals. The first manual is for the company's low profile exit device offering. This new series of parts manuals will assist distributors and end users of the Russwin 372, 382 Series exit devices with parts identifications.

Russwin manufactures a full line of locksets, exit devices, door controls and key systems.



Circle 335 on Rapid Reply

Von Duprin Introduces Exit Device System

A new integrated exit device system from Von Duprin meets the combined requirements of life safety, fire, building and security codes. Series



HS98 and HS99 operate either mechanically or electrically and eliminate the need for costly dual doors, bypass corridors or vestibules.

The new system represents the successful integration by Von Duprin of its rim-type exit device with the Sargent and Greenleaf 8470 Automatic Deadbolt. The result is high security from the outside with around-the-clock single-motion egress from the inside.

The system is designed to work with all types of access control systems from key cylinder to card reader.

Circle 338 on Rapid Reply

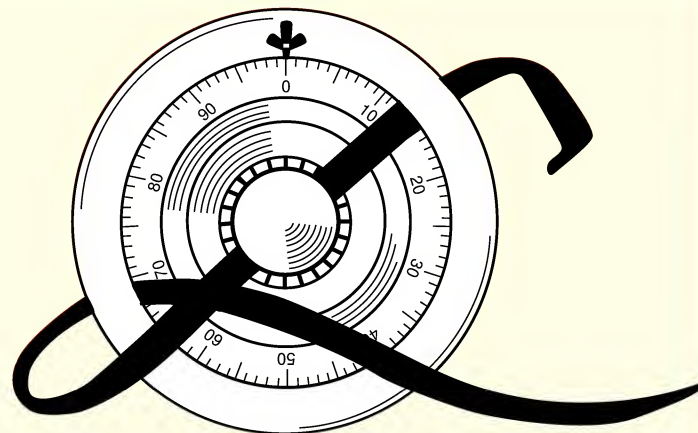
Key Control Systems, Inc. Back In Business

Recently, Key Control Systems, Inc. has resurfaced.

Manufacturing and shipment of the same complete line of quality key cabinets and key control systems began earlier this year.

The new management team claims high quality, speedy delivery, and extremely competitive prices.

Circle 339 on Rapid Reply



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Installing Yale's 5400L

"All functions in the lock are uniform in size, self-aligning and simple to install if one will just spend a few minutes with the instructions."



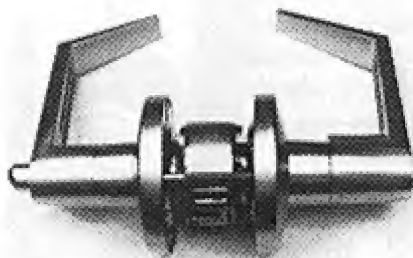
Send your lock and key questions to Jack Roberts, The National Locksmith, 1533 Burgundy Parkway, Streamwood, IL 60107.

by Jack Roberts

I had the pleasure of visiting the Door Hardware Institute show in Philadelphia last October and to say that I was impressed by the booths and floor displays of the various manufacturers would be an understatement.

Many things caught my eye and demanded my attention and it was difficult to select just one item for this review and evaluation. After careful

consideration I finally narrowed my choices down to just three products and from those selected the Yale 5400L series, as the subject of review. (See photograph 1.)



1. The Yale 5400L Key-In-Lever lockset.

Although key-in knob and key-in-lever locksets are rather standard in design, construction, functions and

installation procedures the 5400L series does have some noticeable differences. Designed to meet handicap standards for heavy duty bored locksets in industrial, commercial and institutional applications they feature sturdy construction and independent lever return springs to overcome lever sag.

All functions in the 5400L line are uniform in size, self aligning and simple to install if one will just spend a few minutes with the step-by-step instructions instead of trying to reinvent the wheel. Special tools required for the installation of the 5400L locksets (a modified 1/8" hex key wrench, a spanner wrench and a retainer tool) are supplied with each lockset.

Continued on page 29

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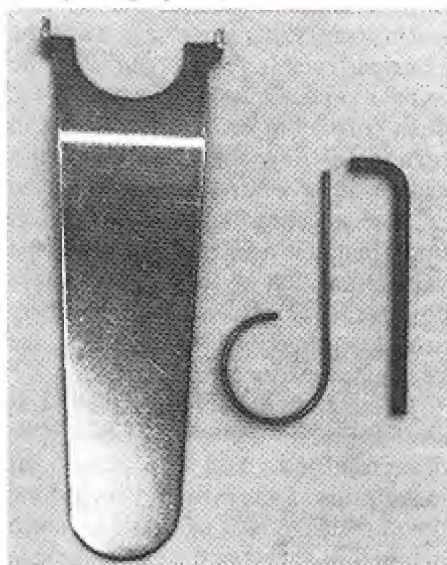
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Continued from page 27

(See photograph 2.)



2. Tools required for 5400L installations.

All 5400L functions may be retrofit to any existing installation having a 2-1/8" through bore, 1" cross bore, and 2-3/4" backset. (3-3/4" latches and 5" extension links are available by special order). Adjustable for metal doors 1-3/4" to 2-1/4" thickness, the 5400L is standard 1-3/4" for wood or mineral core doors. Wood or MC door thickness over 1-3/4" must be specified when

ordering. Special spacer plates are available for 1-3/8" thick wood or MC doors. Adjustments for door thickness are made in the field.

Non-handed, the 5400L may be installed right or left hand on doors swinging in or out. All latches, spring latch and dead latches have a 1/2" throw with two strikes available: standard, 2-3/4" x 1-1/8" with a 1-1/4" curved lip, which comes with a wrought box; and ANSI, 4-7/8" x 1-1/4" with a 1-1/4" lip. The standard strike may be ordered with lip lengths of 1", 1-1/2", 1-3/4" and 2". The ANSI strike is available with 1-1/4" lip only. An optional wrought strike box for the ANSI strike is available for special order.

To meet the specifications of ANSI A117.1 for making buildings and facilities accessible to and useable by the physically handicapped, the lever handles of the 5400L line are available knurled and also with an abrasive coating in order that they may be identifiable to a blind person by touch. These options must be specified when ordering. The Yale 5400L locksets have been listed by UL for use on fire doors having a rating of up to and including 3 hours.

With 15 functions, six finishes and

three lever designs, (i.e., Augusta, Monroe and Pebble Beach) combined with the options already explained, the Yale 5400L line appears to be well suited to meet almost any requirement of architectural, life safety and handicap demands. In addition, the security demands of management can be equally satisfied with the various key cylinders that may be utilized.

The full range of Yale cylinders and keyways, including high security and interchangeable core are available with the 5400L and in addition, Schlage conventional cylinders and Best Interchangeable Core cylinders may also be used. Locksets intended for use with Schlage and/or Best cylinders must be so specified when ordering. However, Schlage and Best cylinders are not supplied by Yale. It should be noted that the 5421L, communicating lock, and the 5430L, institutional lock are not available for interchangeable core cylinders, either Yale or Best.

So much for the pizzazz and specs of the 5400L: let's get inside one of these buggers and see how things work. I think that the first thing that really caught my attention is the "free wheeling" action of the exterior lever handles when the lockable functions are in the locked position. By way of



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explanation, the term "free wheeling" was not coined by me but, rather, is used by Yale in the advertising and descriptive brochures of the 5400L line.

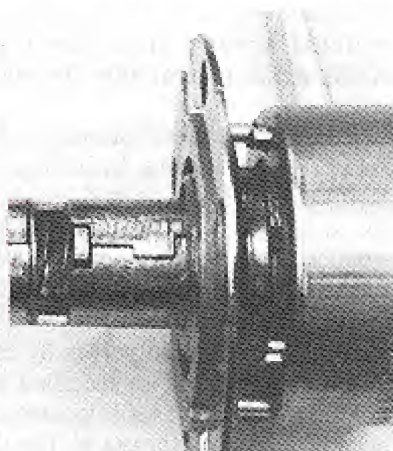
What this means is that the exterior lever, when locked, is not locked or rigid as we normally expect an exterior knob or lever to be, but, instead, is in effect disengaged from the body of the lockset and is free to move, up or down, about 65 degrees from the horizontal position, with no action from the latch bolt. (This is the same amount of movement necessary to retract the latch when the lever is engaged.)

I find this concept interesting although it could perhaps be somewhat confusing to someone not familiar with the operation of the 5400L line. Any confusion that might exist from this action, however, certainly has to be offset by the tremendous advantage gained in the protection of the lockset from heavy handed leverage applied to a rigid (locked) lever.

The inside lever of all functions, with the exception of the 5421L communicating lock and the 5430L institutional lock, is always active. The 5421L and the 5430L are double cylinder locksets and lever action is controlled by the turning of the proper

key in either cylinder.

Our evaluation model is the 5407L entrance or corridor lock, Augusta trim design, US26D finish with a Yale 8 cylinder. This function employs a push (turn) button in the interior lever which, when pushed in, essentially "shifts gears" inside the lock body and disengages the exterior lever from the spindle creating the "free wheeling" action. Photograph three shows the exterior lever cam engaged in the spindle slot. When the interior button has been pushed and the lever cam has moved out of the slot this allows the



3. Exterior lever cam engaged in the spindle slot.

exterior lever to be "free wheeling."

When the proper key is inserted into the cylinder and turned, or, when the interior lever is turned, the interior mechanism "shifts gears" again and the exterior lever is re-engaged with the spindle to permit latch retraction. If the push (turn) button is pushed in and turned 90 degrees clockwise, the exterior lever will remain in the locked or "free wheeling" mode until the push (turn) button is manually returned to the vertical position by turning 90 degrees counterclockwise and released by turning the interior lever or turning the key in the exterior lever cylinder.

Coming out of the box, the 5400L is semi-assembled and must, of course, be disassembled and prepped for installation. I have fussed for a long time about the lack of detail on some instruction sheets and must commend Yale for the excellent job that has been done on the instructions for the 5400L. This is about as good as you are going to get!

Prep starts with removal of the interior lever which has a hex set screw retainer rather than the standard spring retainer. (See photograph 4.) This is where the modified hex wrench is used

Continued on page 32

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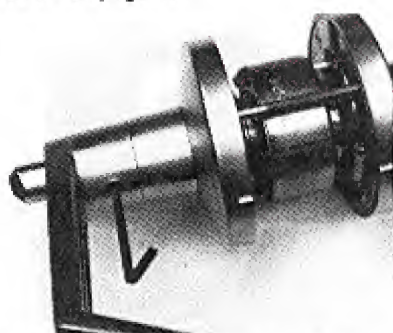


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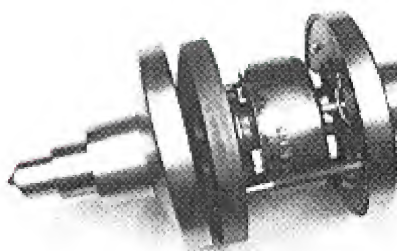
Continued from page 30



4. A hex set screw retainer holds the interior lever.

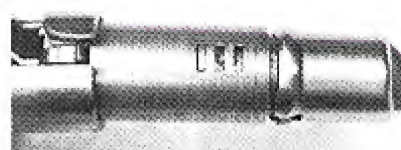
and the modification is that the short leg of the wrench has been made even shorter so that the wrench will turn 360 degrees. Loosen the set screw and the interior lever slides right off the spindle.

The rose sleeve, rose scalp, rose assembly and rose plate slide off the



5. The rose sleeve, scalp, assembly and plate slide off the spindle.

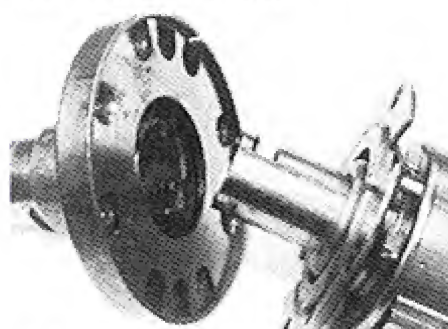
spindle, (see photograph 5) and the 5400L is ready for a 1-3/4" door. For thicker doors (2" or 2-1/4" thick), two adjustments are necessary. The first is on the interior spindle where you will find three spring retainer slots. (See photograph 6.) The slot nearest the lock body is for a 1-3/4" door, the center slot is for a 2" door and the slot towards the push (turn) button is for a 2-1/4" door.



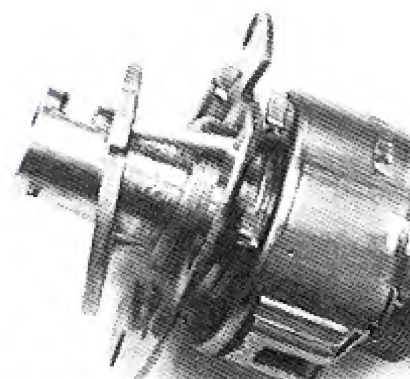
6. Note 3 spring retainer slots on spindle.

Simply push on the retainer and move the button assembly to the correct position for the required door thickness. The second adjustment for door thickness is on the exterior side of the lock body and requires removal of the four screws which hold the exterior rose to the rose plate.

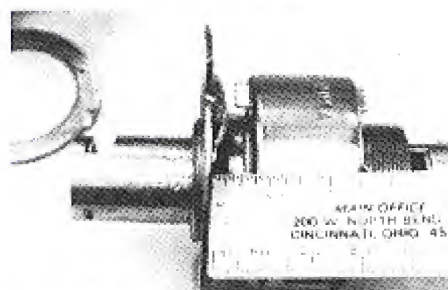
The exterior lever assembly (lever, rose sleeve, rose scalp, and rose) are removed as a unit. (See photograph 7.) The pin plate is removed (see photograph 8), and the rose plate may be adjusted to the proper door thickness. This distance is measured from the outside face of the lock body to the inside face of the rose plate (see photograph 9); 3/8" (as shown) is for a 1-3/4" door, 1/2" is for a 2" door and 5/8" is for a 2-1/4" door.



7. Exterior lever assembly.



8. Removal of the pin plate.



9. Measuring the door thickness.



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For Wood or Mineral Core Doors Only

All functions except 5428.

Remove two screws from outside rose assembly. (See below.)

Proceed with Step 7. Pay attention to Step 8B.

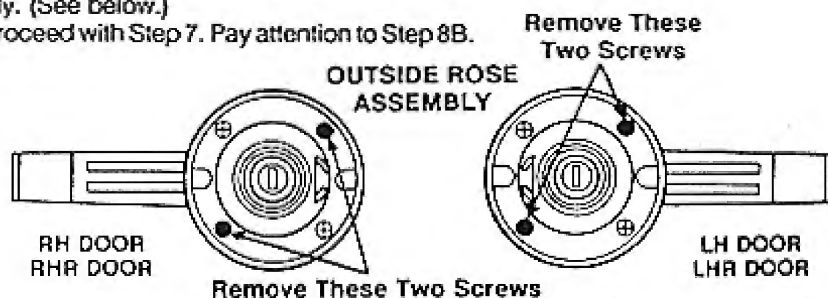
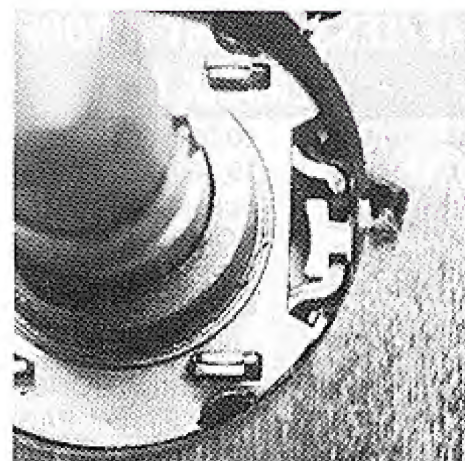


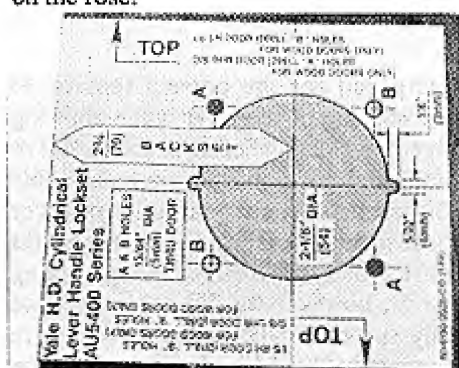
Illustration 10



12. The latch and bolt tail are properly engaging the retractor.

We found that three full turns of the rose plate is equivalent to 1/8" movement. With door thickness adjustments made, the pin plate is put back into position and the exterior rose assembly is reinstalled using only two of the four screws that were removed. (See illustration 10.) The reason for this is that two through bolts are used on wood doors and they screw into these two positions.

With the lock prepped for proper door thickness tape the template to the door and drill and bore as indicated. (See photograph 11.) Note here that holes "A" and "B" (for the through bolts) are drilled only on wood or MC doors. Also note that placement of the template on the inside or outside, right hand or left hand, determines which holes (A or B) are to be drilled. These will line up with the empty screw holes on the rose.



11. The boring template.

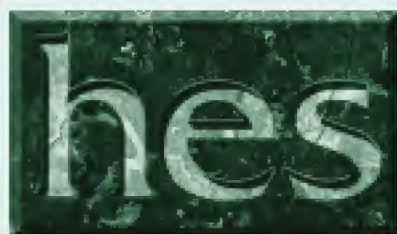
Also, on the template, you will see a 5/32" x 1/8" notch on each side of the 2-1/8" bore. These can be made with a round wood rasp or can be through drilled before making the 2-1/8" bore. Mark and drill the 1" edge bore for the latch, mortise as required and install the latch.

The lock body may now be slid into the 2-1/8" bore making sure that the lock case engages the retainer legs of the latch and the bolt tail is properly



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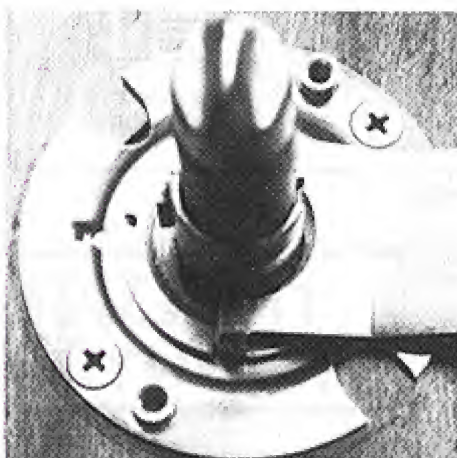
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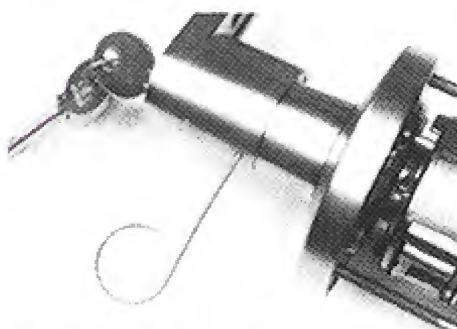
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engaged in the retractor. (See photograph 12.) The interior rose plate is now installed using the two through bolts, and firmly tightened in place, and the sleeve nut is screwed onto the body and tightened securely using the special spanner wrench. (See photograph 13.)



13. The installed rose plate and sleeve nut secured with the special spanner wrench.



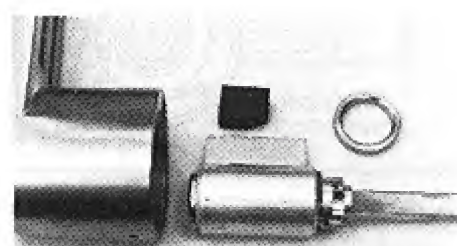
14. Using the retainer tool.

Next, the interior rose assembly is attached to the rose plate with two screws, the rose scalp and rose sleeve is installed, the interior lever put into position and tightened in place with the set screw and the 5400L is ready to drive. Although this installation is somewhat more involved than the standard K1K lockset, it really isn't all that difficult if one will just read and follow the step-by-step instructions on the installation sheet.

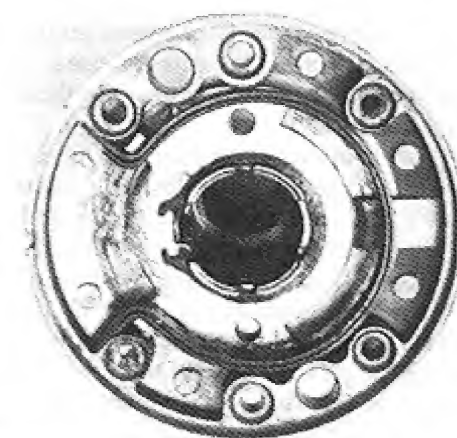
The exterior lever of the 5400L is removed for cylinder service by turning the key 45 degrees and pressing the retainer with a retainer tool. (See photograph 14.) With the lever removed the cylinder slides right out of the cavity with no special effort. Note that there is a retainer pad which fits on top of the bible and a spacer which fits on the end of the plug. (See photograph 15.) Reinstall the pad and spacer

exactly as they were removed.

The lever return/sag springs are accessible by removing two screws holding the rose assembly cover plate. (See photograph 16.) There are two horseshoe-shaped flat steel springs in each rose which are designed and



15. Retainer pad and spacer which fit on the end of the plug.



16. The lever return/sag springs revealed.

tempered for the correct tension to prevent sag of the lever while allowing free movement whether in the locked or unlocked position with no measurable difference in the amount of lever pressure required. Caution should always be used when removing a spring cover, however we did not experience any surprises when these covers were removed. Should replacement ever be necessary it can be done in the field with no problem.

We found that the 5400L performs as stated in the advertising materials which we have seen, is straight-forward in installation and service procedures and we must rate it as an excellent product from Yale.

For more information contact: Wayne Griffin, Yale® Locks & Hardware, P.O. Box 25288, Charlotte, NC 28229-8010, (704) 283-2101, ext. 171. §

Abloy 2700 Series Disklock Deadbolt

The Abloy 2700 Series maximum security disklock deadbolt offers some unique features. The lock design utilizes rotating disks rather than pin tumblers which creates virtually pick proof security. The disk tumbler design also affords excellent masterkeying capability.

The bolt itself has two steel balls that lock into the strike to prevent prying or jimmying. A steel guard over the lock mechanism prevents "ice pick" attacks and the deadbolt features a lockable thumbturn which increases the security even further.



Circle 262 on Rapid Reply

Adavco's Bulldog Locking Bars™

The Bulldog Security Locking Bar™ model 500, manufactured by Adavco Security Products is designed to fit all single outswinging and inswinging doors and both wood and hollow metal applications. It can be custom fitted easily in the field to accommodate door widths of 30" to 48". Two 2" steel bolts secure the door to the frame at both the latch and hinge side of the door.

The model 500 will accommodate a padlock (not included) for extra protection.



Circle 263 on Rapid Reply

A-J Mfg's. Glass Frame

A-J Manufacturing introduces a new variable glass frame that self adjusts for glass thickness from 1/4" to 1-1/4".

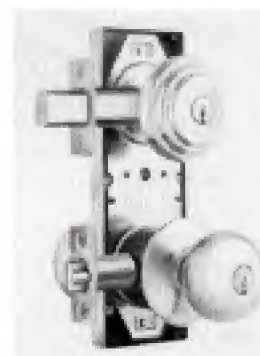
For installation in 1-3/4" wood or hollow metal doors, this frame is made from 18 ga. electro galvanized steel with corners mitered and factory welded.

The VGLF series provides full security from one side and is a low profile frame for both door sides. Any frame size can be easily installed and glazed by a single installer.

Arrow J Series Double Lock

Arrow introduces the J series Double Lock. This lock is the perfect solution for motels, apartment houses or any project where security, aesthetics and cost are important.

The 4" on center (J series) is ideal for wood door applications, and incorporates the M series standard duty cylindrical lock and E series heavy duty deadlock or optional D series extra heavy duty deadlock.



Circle 265 on Rapid Reply

AWI Offers Cylinder Selection

AWI cylinders are offered in mortise, rim, thumbturn, and dummy styles. Convert-A-Lock cylinders are also offered for knob style locksets and deadbolts as well as sliding patio glass doors.

The original manufacturer's pin spacing and key cut depths are maintained to achieve integration of these cylinders into existing masterkey systems. A variety of lengths and finishes are available.

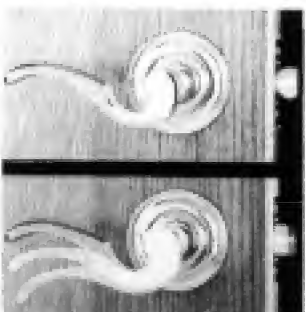


Circle 266 on Rapid Reply

Baldwin Changes Tubular Latch Unit

Baldwin Hardware Corporation has announced a re-engineering of the company's tubular latch. The new version has fewer working parts and features precision made parts for smoother operation and longer product life.

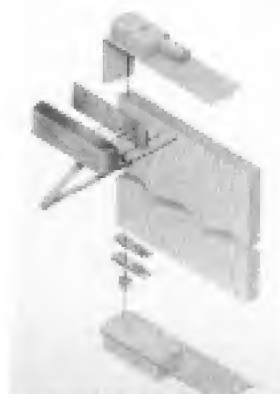
The new Baldwin tubular latch, which was tested in excess of 400,000 cycles without fail, has a full retraction arc of only 27 degrees, as compared to a previous turning radius of 86 degrees.



Circle 267 on Rapid Reply

CII's Conversion Package

Conversions International, Inc. (CII) has introduced the first door closer conversion package that enables locksmiths to deactivate broken or hard-to-operate floor or overhead concealed closers and put doors back in service faster than ever. This patented product eliminates the need to remove defective closers, finish plates, or thresholds.



Circle 268 on Rapid Reply

Corbin C-6 Keying Kit

The Corbin C-6 Keying Kit is available for use with all Corbin X, X70, Z, Z70, series bittings. It will also accommodate regular master ring and removeable core cylinders.

A convenient key biting guide gives important information on cylinders, key depth codes and related pin lengths. A spill-proof design keeps pins contained in their own compartments. A molded plastic tray is equipped with item identification numbers. Packing includes pins, slides, drive springs, construction balls, plug followers, and tweezers.



Circle 269 on Rapid Reply

Continued from page 36

Deronde's Textured Metal Doors

Deronde Products announces a new line of textured metal doors and frames using RIGID-TEX® patterned metals, which offers rugged durability and lasting beauty. Textured metals are highly mar, scratch and dent resistant and maintain their original beauty far longer than other surfaces. They also minimize glare and reflections and are easily cleaned.

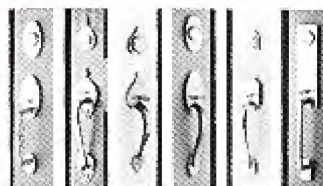
Textured metal doors, frames and protection plates are available in six different patterns, both in stainless steel and galvanized steel. Applications include swimming pools, food processing plants, prisons, detention centers and more.

Circle 270 on Rapid Reply

Dexter's Elegant Designer Series

The Designer Series of upscale entrance, knob and lever sets and accessories is available from Dexter by Master Lock. Specifically designed for residential and light commercial applications, the Designer Series offers elegant style and high-security protection in door hardware.

Constructed from solid brass and steel, the Designer Series complements traditional, transitional and contemporary styles. Recent additions to the Designer Series include the Facets™ collection and the St. George handleset.



Circle 271 on Rapid Reply

DOM Introduces New Pin Kit

DOM Security Locks announces its new pin kit to service its interchangeable core that fits into Best, Falcon, and Arrow.

This 7 pin core has the famous DOM floating ball system. A reversible key must pass a restriction pin and then simultaneously activate a locking feature within the cylinder before it becomes operational. The interchangeable core is highly pick-resistant and maintains key control through DOM's registration system.



Circle 272 on Rapid Reply

DynaLock's Electric Deadbolt

DynaLock Corp. has introduced the new 1300 Series line of narrow design electric deadbolt locks.

Ideal for new construction or retrofit the 1300 Series requires a 1-1/2" x 8" cutout and a 15/8" backset.

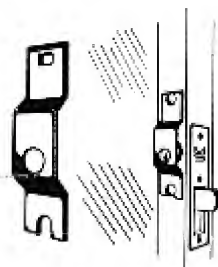
The 1300 Series is fail safe and is available in 12 or 24 volt AC/DC with optional auto re-lock, door position sensor, bolt position sensor, plus architecturally compatible colors and finishes.



Circle 273 on Rapid Reply

HPC's Newest Guard Plates

HPC, Inc.'s narrow stile cylinder guard plates are now available in five different models. The guards are made of case hardened steel with a simulated duro-bronze finish. They are made for either hand doors, in-swinging or out-swinging. Protecting against puller action, these easily mounted items appear as original hardware when installed. The innovative mounting system makes them simple to put on or remove. No special tools are required.



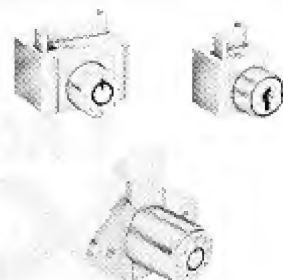
Circle 274 on Rapid Reply

Kenstan Expands Lock Line

Kenstan Lock expands its cabinet lock line with security designed locks: the spring bolt lock and the unique z-bolt.

The spring bolt works in self closing drawers and hinged doors. The bolt springs behind a steel strike plate which secures the door.

The z-bolt is secured within the frame of the cabinet so design lines remain intact. Sliding glass or wood doors actually move over the body of the lock, and the z-shaped bolt slides up.

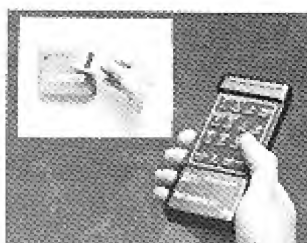


Circle 275 on Rapid Reply

Keri Systems' Proxlock

The Proxlock, Model PXL-35 is a single door, two reader, access control system designed to work with the Indala proximity readers and cards. It provides all the advantages of proximity technology at a low cost.

Aside from the door lock, only two components require installation: The reader, which can be mounted up to 350 feet from the controller; and the controller. The controller includes a high quality 12VDC power supply for lock operation and an RS232 serial printer output.

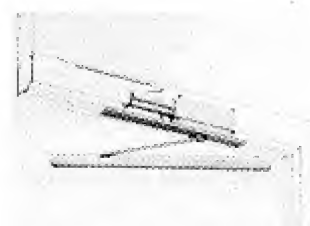


Circle 276 on Rapid Reply

LCN's Door Closer Series

LCN Closers introduces the 2210 DPS Series which combines maximum security with concealed overhead mounting.

The 2210 DPS provides secure door control, resists tampering and abuse and interfaces with security monitoring systems. The extra heavy duty steel arm with a low friction roller and the sturdy jam-resistant steel track provide maximum security with safe and easy operation.



Circle 277 on Rapid Reply

Leveron Helps Disabled Citizens

Disabled citizens struggling to open doors in public buildings, offices, at schools and work prompted Leveron to convert doorknobs to lever handles with a versatile lever system.

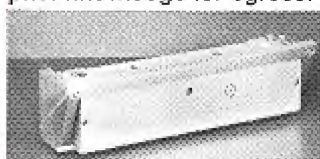
The Americans with Disabilities Act by law mandates access for everyone, which is solved with Leveron's new lever handle knobs.



Locknetics' 101 Delayed Egress

Locknetics Security Engineering is introducing a new "self contained" Delayed Egress 101 System, which is designed to fulfill NFPA Life Safety Code 101, while providing ongoing access controlled security.

The system utilizes a high security magnetic lock with a patent pending door sensing mechanism. On board electronics and a plug-in transformer complete this "self contained" package, which provides an easy-to-install, cost-effective solution for life safety/security applications. The DE101 System is designed so that the user need not have prior knowledge for egress.

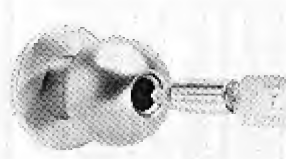


Lori's New Kaba Cylinder

Lori Corporation has introduced a new, flexible Kaba cylinder that offers interchangeability for less than half the cost of replacing door hardware with more conventional cylinders.

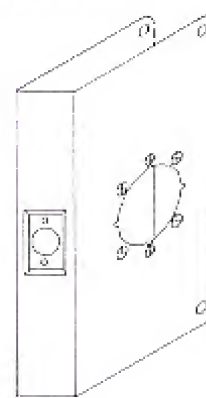
It provides complete key control, because it's instantly retrofitted to virtually all current makes of locksets. If employees or associates lose keys, a set of Kaba cylinders instantly rekeys the access areas needed immediately for security.

The new Kaba I.C. augments a full line of Lori cylinders along with Kaba Nova electronic door access control systems.



M.A.G.'s New Install-A-Lock

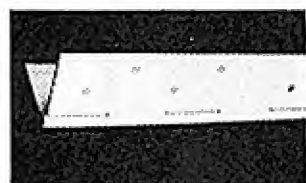
The added multiple hole locations eliminate field prep and save installation time. The universal design is non-handed and accommodates square and beveled edge doors. These 4-3/4" x 9" solid units for 1-3/4" thick doors, 2-3/4" backset, are stocked in polished brass, satin bronze, and satin stainless steel finishes. Item numbers are 4-PB-2, 4-BN-2, and 4-S-2.



Markar Continuous Hinges

Markar Products, Inc. has announced that all of their full mortise model continuous hinges will now have a templated hole pattern. Geared and knuckle design full mortise aluminum, steel and stainless steel continuous hinges will feature identical installation hole patterns.

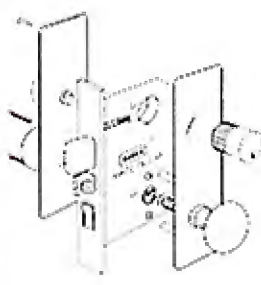
Standardized hole patterns will allow aluminum, hollow metal or other fabricated entrance ways to be pre-patterned, from a design stage, to custom fit Markar continuous hinges. Door companies will also be able to pre-fit doors prior to installation.



Marks Introduces Mortise Locksets

Marks USA announces the redesign of their Classic knob/plate mortise lockset.

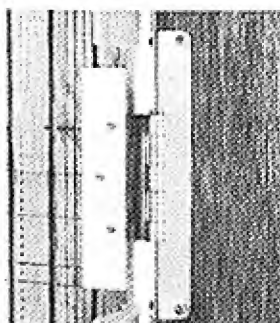
The new Classic knobsets feature thru-bolted design. No longer will these locksets use surface mounted trim, threaded swivel spindles, screw-on knobs or knob set screws. Instead, the new design utilizes knob/plate assemblies, steel reinforced, which thru-bolt through the lock body and secure with vibration-proof screws. This assures automatic trim alignment and extra strength.



MDM Products' HingeGuard Kit

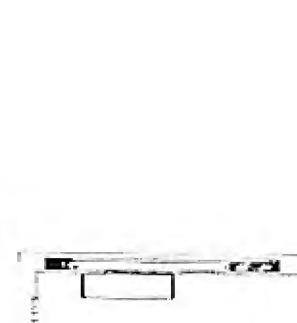
MDM Products Hardware and Auto Accessories is introducing HingeGuard the door hinge repair kit. HingeGuard add strength and security to hinges of your customers' doors or hinges previously damaged through force, accident or aging.

The HingeGuard kit is comprised of two pieces and is available in a multitude of custom finishes. Easily installed, HingeGuard eliminates the need to replace stripped doors or relocate hinges.



New England Stocks LCN

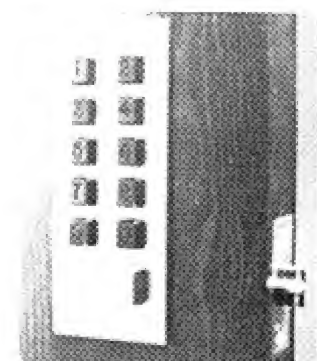
There has always been a need to get Life Safety products in a hurry. New England Door Closer, now stocks the full line of LCN ME, MED, and SED Sentronic® Closer Holder. Also stocked are the replacement parts that are needed quickly to keep the units in proper working condition.



Preso-Matic's 8200 Series Locks

Preso-Matic offers keyless mechanical pushbutton combination door locks with a hardened steel deadlatch spring bolt. They lock automatically when a door is closed, and unlock from the exterior only when the correct combination is pressed.

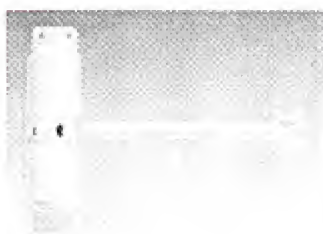
The four number combinations offer 10,000 possible combinations and seven number combination locks offer 10,000,000 combinations.



Reilor Grows With Gibclosen

Reilor, now offers the Gibclosen door closers. A name brand closer for many years on the European market, Gibclosers are taking off in the States. The original Gib is UL listed, easy-to-fit, right or left hand application and can be used in home, office or industry.

This closer has been approved in many states by Fire Marshall's for installation on apartments, condominiums, hotels, etc. and is available in white, brown and gold.



Rofu Offers Electromagnetics

Rofu International Corporation offers its line of electromagnetic locks and accessories with a number of new products.

The sliding door magnet, series 8000, with a holding force of 700 pounds maximum, can be mortised into a door jamb or can be surface mounted by using the optional rim housing for the magnet and armature plate.

Z-brackets are available in standard and tamperproof models for all series of Rofu magnets.



Decorative Lever From Schlage

The Mediterranean Collection, consists of two groups of products: the Elite and the Designer series. The Elite series, Asti, Avanti, Cara, Merano, Trevi, Fiori, Mia, and Riva, is forged of solid brass and is comprised of six lever and three knob designs. All of the Elite series is available in polished brass and some are also available in polished chrome. The Elite series is unprecedented in its breadth of traditional and contemporary levers in elegant and practical designs.



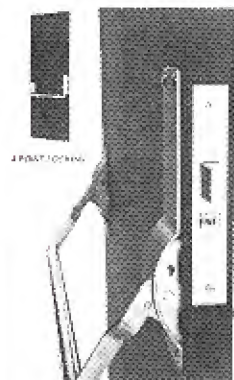
1991 Sealeze™ Catalog Available

The unsealed gap around doors can account for over 90% of building heat loss. Weatherstripping, often neglected in building maintenance and energy conservation plans, can easily prevent this. But conventional weatherstripping won't last long under heavy use in commercial buildings.



Securitech Offers Deadbolt Security

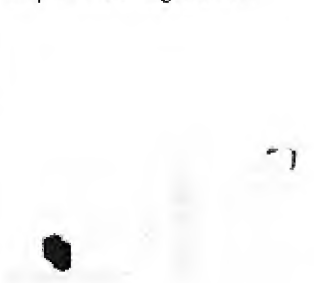
The Series 8000 Auto-Bolt locksets from Securitech Group, Inc., automatically deadbolt the door each time it closes. With the UL listed P*E*D*S (Panic Exit Deadlock System), security professionals can offer their customers the combination exit device and deadbolt lock. The Auto-Bolt series also includes, as an option, Securitech's multipoint feature for 2, 3 or 4-point deadbolt locking.



Securitron's TSB-1 Touch Sense Bar

The Model TSB-1 Touch Sense Bar from Securitron is an architecturally attractive exit bar that releases any electric lock and complies with "no prior knowledge" egress requirement.

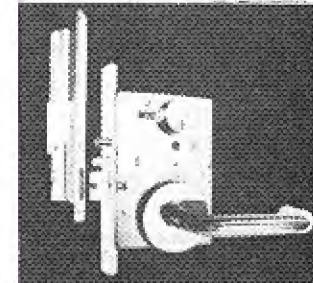
The Model TSB-1 currently is part of two UL Listed locking systems involving delayed as well as free and immediate egress for non-fire rated doors, and the full UL Listed status of Securitron's systems allows worry free compliance with building codes and fire department regulations.



SDC's HiTower Patented Locks

The unique UL listed HiTower locks, patented by Security Door Controls, find many applications in commercial, industrial and technical fields, wherever their dual functions are advantageous or required by code.

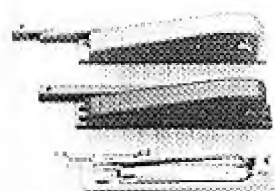
The HiTower electric controller installs in a 1-3/4" frame, 1-1/4" or 1 1/2" frames optional. The heavy-duty mortise lock may be any of the major locks: Schlage, Arrow, Falcon, Yale, Corbin, Sargent or Russwin.



Door Closer From Sentinel Group

The Sentinel Group, a leading supplier of architectural glass and commercial door closers, recently introduced a new line of residential door closer. The sn100 series incorporates a sealed nitrogen system tested for 3 million cycles, separate closing and latching adjustments, easy D-I-Y installation and a 2-year guarantee.

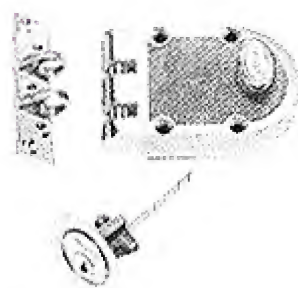
Five different models are available for every residential application.



Top Lock's Concept Rim Lock

A new vertical deadlock, following the design of the traditional "Jimmy-Proof," but adding superb finishes and quality features has been introduced by the Top Lock firm.

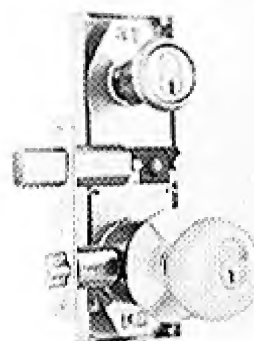
The new solid bronze Concept F-1000 series is being offered in polished chrome, polished brass or bronzo. It features the burglar-frustrating shutter-guard which automatically locks the bolt if the cylinder is attacked.



Arrow's K Series Double Lock

Arrow introduces the K series Double Lock. This lock is the perfect solution for motels, apartment houses or any project where security, aesthetics and cost are important.

The ASA strike (K series) is ideal for metal door application. This lock incorporates the Arrow M series standard duty cylindrical lock and the 1" solid steel deadbolt, with hardened steel pin, operated by a rim cylinder.



Corbin's Exit Device Manual

Corbin Architectural Hardware has introduced the first in a newly designed series of product parts manuals. The first manual is for the company's low profile exit device offering. This new series of parts manuals will assist distributors and end users of the Corbin 20, 29 Series Exit Devices with parts identifications.



Keri's Proxlock ER-102 Controller

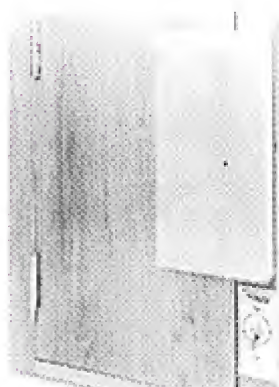
The Proxlock two man rule controller is a single door, Proximity Access Control System from Keri Systems, it requires that two cards be presented to the reader in order to unlock a door, or to perform some other access control function. The control is smart, has a 1000 card capacity and is easily programmed using a hand held, wireless remote control.

Programming signals are sent electro-statically from the programmer to the controller.



Locknetics' 340 Series

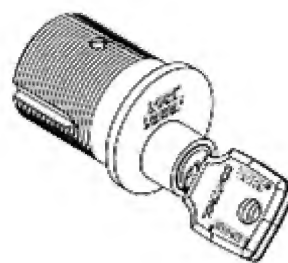
The new 340 Series Center Pull/Mortise Magnet Lock provides a unique security solution in electromagnetic locking. Its patent pending design conceals the locking mechanism for an aesthetically appealing installation. And it provides a center locking position at the same height as standard door locks.



Lori Corporation's Gemini

Lori Corporation is pleased to announce the addition of interchangeable core to the Gemini High Security product line. In addition to providing mortise and rim cylinders, Kaba's patented core retrofits existing knobs and levers without alteration. There is no need to purchase a separate, costly conversion knob kit.

Kaba Gemini IC can be added later without loss of combinations to systems that were not originally planned for interchangeable core.



M.A.G.'s New 2000 Series

The 2000 Series Install-A-Lock door reinforcers from M.A.G. Eng. & Mfg. Inc. are increasing in popularity and use because of their ease of installation and savings of time. There's no need to make a cut-out on the door or remove an existing latch, because the door reinforcer installs over the front of the standard latchface or drive-in latch. This product is most universal since it is non-handed and accommodates square edge and beveled doors.





Building Hardware Profits

"You can boost your sales volume by checking and replacing a few simple items of working door hardware when doing lock work."

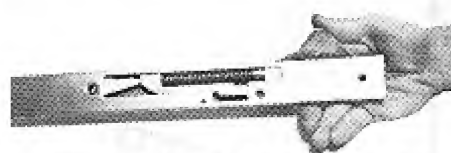
Before the days of self-service filling stations, a good mechanic would build added profits into the then-common oil check. While under the hood, he'd take a look at the spark plug wires, air filter, fan belts and radiator hoses. By recommending needed replacements or spotting potential problems, he increased his unit sales as well as providing added service. In much the same way, you can boost your sales volume by checking and replacing a few simple items of working door hardware when doing lock work. Between replacements and new sales, you'll find added dollars in routine jobs.

Let's take a look at some typical items, where and why they are used,

how they work and what to watch for when working with them. In addition to obvious hardware items such as hinges and the latches that are already an integral part of your lock business, commercial doors use many other kinds of special hardware. Some of these include fire door coordinators, which control the closing cycle on pairs of doors, flush bolts that secure one door of a pair, either automatically or manually, and a wide variety of stops and holders.

Fire Door Coordinators. A coordinator controls the closing sequence of pairs of fire doors by holding the active or primary door (with astragal) open until the inactive door closes, assuring complete closing for a

fire seal and preventing damage to the doors and their hardware. While gravity-type coordinators may be used for this purpose, a bar-type coordinator (*see photograph 1*) is generally favored for better aesthetics and greater vandal resistance.



1. Cutaway view of the Glynn-Johnson coordinator shows new cam design and longer override spring.

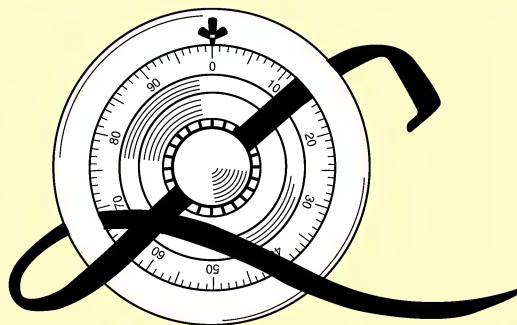
Override is an undesirable but normal occurrence with fire door pairs.

Continued on page 54



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Continued from page 52

If an individual forces the active door shut before the inactive door, the astragal will interfere, and the doors will not close properly. The coordinator must be designed to release first in such situations, to protect the doors, frame, hinges and other door system components from damage. Because most coordinators are designed to accommodate a limited number of such cycles, excessive override occurrences will cause internal springs to break or parts to wear prematurely.

Wear causes the original override pressure to change, reducing the pressure required and causing more override incidents. This in turn makes it necessary to reduce closer force to undesirable levels. Eventually, as the coordinator breaks or loses spring tension, it will not hold the active door open under any circumstances, resulting in improper closing sequence when the active door with the astragal closes first. As a result the fire seal is lost. In either of the above cases, there are opportunities to sell and install replacements, so watch for improper door operation as a tip-off.

When specifying a coordinator, check for proper sizing. The length of a

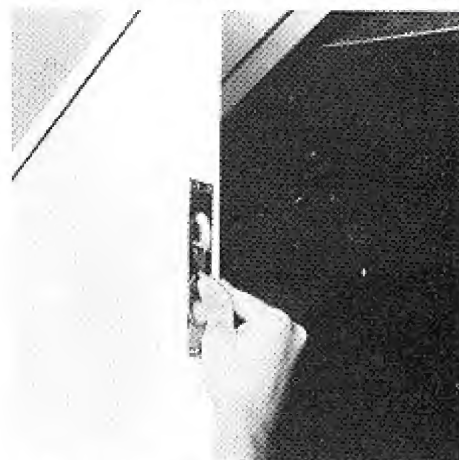
coordinator between the two paddles must be greater than the width of one door, because the primary (smaller) paddle must be tripped by the inactive door. Manufacturers generally offer coordinators in standard sizes, such as 32", 52" and 60" lengths, with cosmetic filler bars available to accommodate various door sizes.

It goes without saying that following the manufacturer's installation instructions is the key to a successful, trouble-free coordinator installation. One critical item in the procedure should be stressed, however. Never install a coordinator unless the door itself is properly adjusted, including the operation of any closers, latches, exit devices or other hardware. In particular, closers should be installed and adjusted in conjunction with the coordinator, so a proper balance is obtained.

Flush Bolts. When installed correctly, with the proper coordinator and closer, flush bolts work with the listed single-point latch of a pair of swinging fire doors to provide the three-point latching on which fire door listings are based. Available in three basic types, these simple items are a vital part of the hardware "team" required to make pairs of labeled fire doors safe and effective.

Flush bolts are generally classified as manual, automatic or semi-automatic, also known as constant-latching. Each type has its own advantages for specific applications. For each, the manufacturer will have different versions for wood and metal doors, so there are really only six versions to cover all applications.

Probably 95 percent of all flush bolts are furnished in pairs, one each for the top and bottom of the door, since both are needed to provide the three-point latching on which UL listings are based. Occasionally, where it is not necessary



2. Glynn Johnson manual flush bolt.

Continued on page 57

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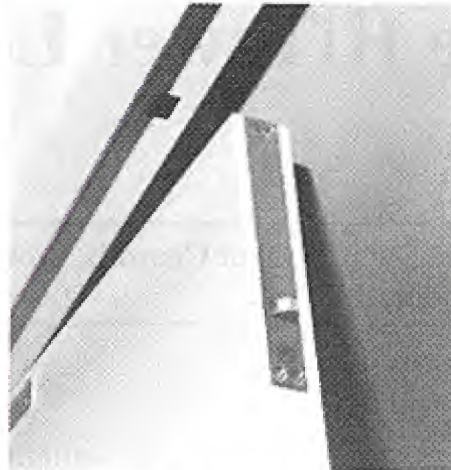
Continued from page 54

to meet a code, a top bolt may be used individually.

The simplest flush bolt designs are the manual types (see photograph 2), in which the latch bolt must be extended and retracted manually. Most of the time, they remain latched. A typical application is a pair of fire doors on an electrical closet. Fire doors are required here, but the second door is needed primarily to install large equipment or for better maintenance access. Most of the time, the second door can remain latched without inconvenience.

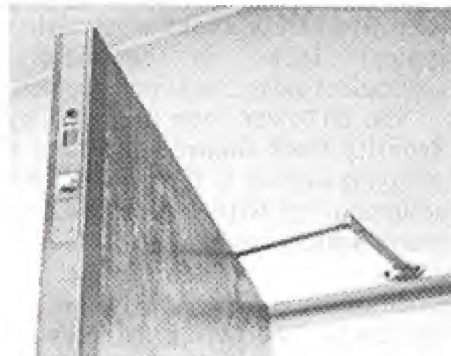
Automatic flush bolts (see photograph 3) are used with pairs of fire doors in most public areas, where substantial traffic results in frequent use of doors that normally must remain closed to meet fire regulations. Closing the active door automatically projects the bolt into the head frame, preventing the inactive door from being opened. Opening the active door retracts the bolt, freeing the inactive door for easy egress. To provide the proper three-point latching, flush bolts are usually installed at the top and bottom of the doors.

Also known as self-latching or constant-latching, semi-automatic flush bolts (see photograph 4) are the least-



3. Automatic flush bolts in use.

frequently used but are preferred in certain applications. Closing the



4. Self or constant latching flush bolts.

inactive door automatically latches the bolt. However, to open the door, the bolt must be retracted manually.

While this may seem inconvenient, it is advantageous in some situations. One case is on a pair of doors where one is used only infrequently, such as in loading or moving large equipment, while the other door is used regularly.

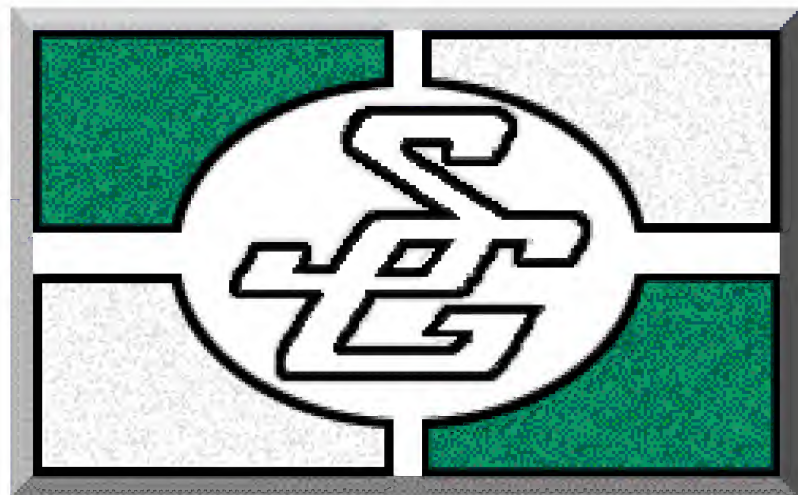
Most automatic flush bolts feature removable face plates in various finishes, built around mechanisms consisting of cast or stamped components. Because the faceplate is the major finish-sensitive part, you can fill a need for most finishes quickly while maintaining a smaller inventory of the mechanisms and simply interchanging the faceplates. Some manufacturers supply a kit that includes all finish-sensitive components. Installation is the same as for other designs, except the face plate can be mounted after the flush bolt is installed to avoid handling damage.

Look at the catalogs and literature from leading manufacturers of these and other door hardware items, and you'll see the bottom-line potential. Start now to watch for new or replacement hardware business, and you'll open the door to bigger profits per job. §

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The HiTower Lock

"The HiTower Lock, invented by Security Door Controls, provides a satisfying solution to the problem of meeting life safety codes."

In order to provide higher levels of security, retrofitting of electronic hardware is a key issue facing today's locksmith. With the increased threat of terrorism, the escalation of crime and crucial life safety issues, customers are looking for better ways to assure their facilities are secured with the most up-to-date technology.

The main goal of the locksmith is to provide customers with the best available security. When assessing a retrofit installation, there are two major requirements which must be addressed: 1) Life Safety Codes, which are in compliance with Universal Building Codes. 2) Alteration of the labeled fire doors or frames cannot be voided when modifications are made.

When assessing a retrofit installation, the type of door and frame, existing hardware and its preparation, as well as the esthetics of the design must be considered. Sometimes locksmiths have difficulty complying with life safety codes when using typical locks in commercial applications today...the mortise lockset.

The HiTower lock invented by Security Door Controls provides a satisfying solution to this problem. For aesthetics, the HiTower uses existing preps which conceal the electric controller in the door frame. No modification is required (which might void the fire label) as may be necessary when providing an electric strike. The HiTower function also allows access

control and requires no knowledge or effort to exit.

The lock releases mechanically by turning a knob or lever. No push switch or motion detectors are necessary. For these reasons, the HiTower retrofit will provide an excellent solution to a door hardware problem. The product requires no switching from inside to exit.

The latest solution for retrofitting is the SDC model R7550 HiTower Lock. This model incorporates the same new design features used on the already proven 7500's and is more forgiving for misalignment. It also includes adjustment features for wide door gaps. The new R7550 model utilizes the Schlage L9080's mortise lock in the door with a retrofit electric controller mounting in the door frame. Most

Continued on page 60



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Continued from page 58

mortise locks have common prep. When referencing strike center line to mortise lock center line, it makes the R7550 a natural solution.

The electric controller will fit ANSI 4-7/8" prep with no modification cut out to the frame itself. It is designed to fit 1-3/4" and 2" hollow metal face frames.

When installing the electric controller, first connect wire leads. With the solenoid pointing down, insert the controller in place and secure with screws provided.

Note the electrical box shown in illustration one. This may or may not be required depending on the type of opening (fire rated or not fire rated), voltages (usually low voltage when retrofitting), building codes, variances from local authorities, etc.

The door portion may require modification for redrilling mounting holes for trim assembly. Note that the Schlage L9080 lock on wood doors depth usually takes a deeper mortise than most similar locks. This may or may not be a problem as most common mortise preps in doors are done larger anyway. (See illustration 2. R7550 modification to Falcon door prep.)

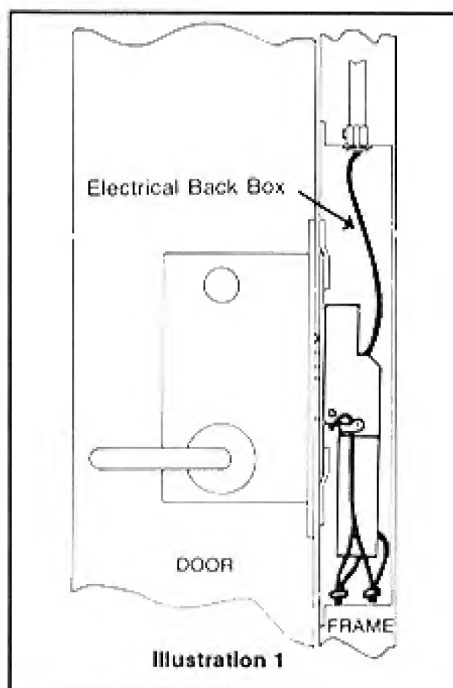
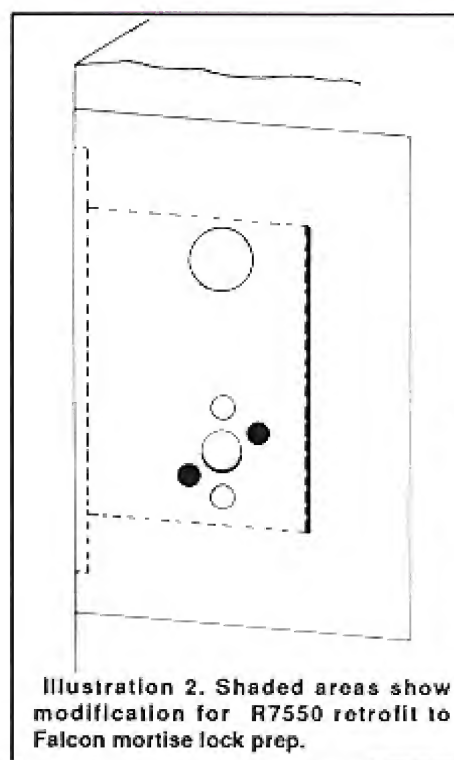


Illustration 1

After necessary door modifications, install the mortise lock and trim. Now close the door and make any adjustments to the door closer as needed. With the door closed check the alignments. Fit the door to the proper 1/8" door cap at top and lock jamb side. If necessary shim and adjust the hinges for fit. Check the warpage of the door and straighten if necessary. The door



should come closed to an even vertical line against the door stop.

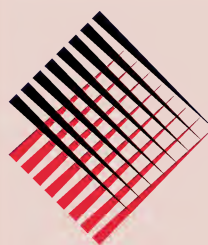
With the HiTower de-energized, check to see that the latch bolt moves freely back and forth into the strike pocket without binding, operating the knob or lever with the door in a closed

Continued on page 62



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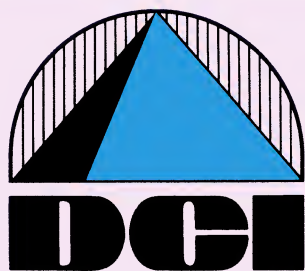


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Continued from page 60

position. Also, make sure the deadlocking plunger is in line with the plunger head on the electric controller.

Now apply power to the lock. The outside knob or lever handle should be rigid and locked. Check several times to insure adjustment. If adjustment is necessary adjust with power applied to the electric controller. The controller is set for door clearance as shipped from the factory. If clearance between the door and jamb is more or less than 1/8", the following adjustments must be made. (See illustration 3.)

The second most common application for the R7550 HiTower

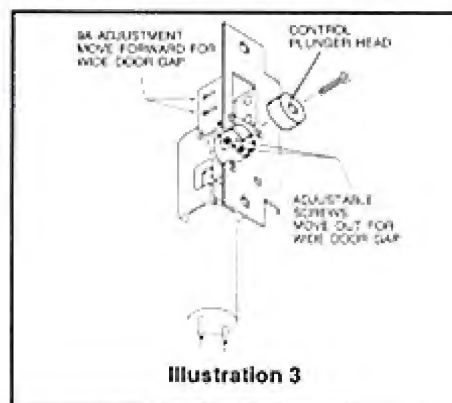


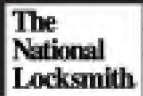
Illustration 3

retrofit is the replacement of the original 5000's HiTowers. These original locks, which were installed with knob trim, must be updated to meet handicap requirements. Now, with the enforcement of local authorities to bring these locks up-to-date, the addition of lever trim is required. The best solution is to replace it with a complete R7550 HiTower retrofit by lever trimset. Refer back to details and installation instructions for replacement.

Although you can update the 5000's, our original HiTower Model 5000's utilizes a Falcon mortise lock chassis. This chassis was designed for knobs only. When updating the 5000's with Falcon lever set, it is necessary to also replace mortise knob chassis with Falcon lever lock chassis from SDC. Lever set and mortise lock match identically to existing door preps. No replacement is required for the electric lock in frame.

HiTower locks are not only supplied in stairwells, but throughout office interiors, storerooms and computer rooms. The R7500's is a practical retrofit to today's critical security problems.

For more information, contact: Security Door Controls, P.O. Box 6219, 31280 LaBaja Dr., Westlake Village, CA 91360, (818) 889-1622, §



The Fyr-Fyter Safe

"The dial looked like a standard Meilink dial, but it was not. I did not understand until I got the safe open and disassembled the door for repair."



by Dale Libby

I like new safes. They may not always represent a challenge, but they do pose interesting opening progressive sequences. The safe in question is the Fyr-Fyter. Illustration one shows a representational drawing of the outside of the safe.

The dial and ring were Meilink look alikes. The handle was in the center of the door, and below the handle was a

five wafer cam lock. This arrangement was somewhat similar to the early design of Saga and other imported safes. These units used a direct drive type of cam and lock arrangement. I put pressure on the opening handle in both directions, and noticed that there was no binding of the dial when pressure was exerted.

I thought that this safe arrangement was closer to Gardall and other safes that used a VD (Vertical Down) mounting array. In this assumption I was entirely correct.

After trying manipulation for about ten minutes and achieving nothing, I decided to pull the dial from the spindle so that my repairs would be under the

dial and not visible. I attached my puller twice, with no visible results. The dial would not pull. The reason can be seen in illustration two.

This dial looked like a standard Meilink dial, but it was not. The dial and ring were both secured to the door, and not dependent on the lock. The ring was screwed to the door in the usual manner with two phillips screws. The dial was also secured to the door by a couple of large and obstinate star washers which resisted pulling, jerking, and yanking. I did not understand this until I got the safe open and disassembled the door for repair.

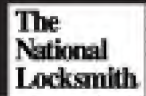
Before drilling, I played with the

Continued on page 66



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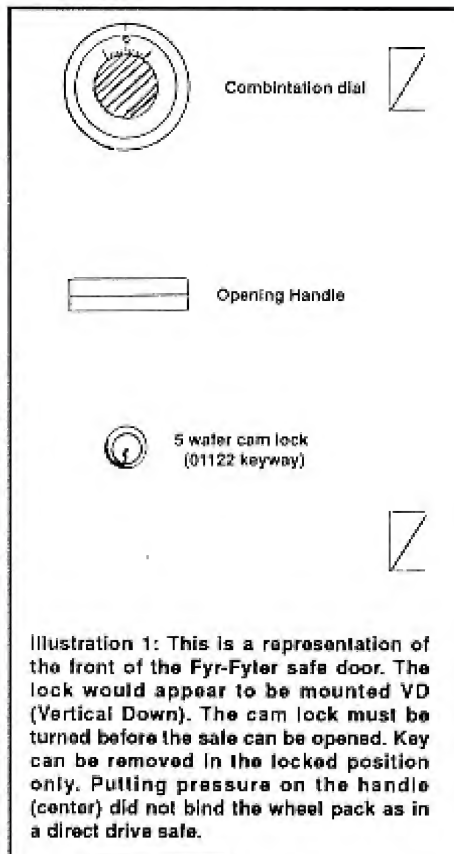
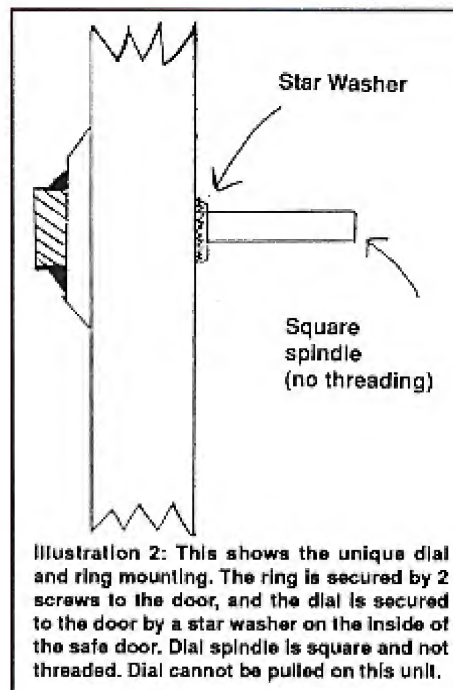


Illustration 1: This is a representation of the front of the Fyr-Fyter safe door. The lock would appear to be mounted VD (Vertical Down). The cam lock must be turned before the safe can be opened. Key can be removed in the locked position only. Putting pressure on the handle (center) did not blind the wheel pack as in a direct drive safe.

outside cam lock. It was very easy to pick, and after inspecting the wafers in both positions, I noticed that the wafers



only moved in the original position with regard to the first and locked posture of the cam lock. I realized that the key could only be removed in the locked position.

I impressed a key for the lock. At first the 01122 key blank would not enter the keyway easily. I took a small hammer and "helped" the key blank in and out several times. It worked easily

after that and I read the lock (using Bob Sieveking's method) and made a working key.

The safe was located in a filled clothes and junk closet with barely enough room for me to get to the front of the door. Lighting was another problem. I opted to drill from the top of the dial down into the safe to read and transfer the wheel gates to the correct opening position.

I really did not believe this to be a Meilink safe, because it did not feel like a standard Meilink safe lock. If I had been thinking more clearly, I would not have drilled in from the top at about 15 on the dial above the dial ring. The reason for this is that Meilink (as well as some others) use large metal spacers between the wheels in the lock to minimize the drag co-efficient between wheels and to keep the wheels clear of each other.

When drilling on the wide side of these spacers you see the first wheel clearly and one spacer after drilling into the combination lock. To see the additional wheels, you have to drill through two spacers. Not only is this hard (and stupid), but one can make an easy opening difficult because spacers

Continued on page 68

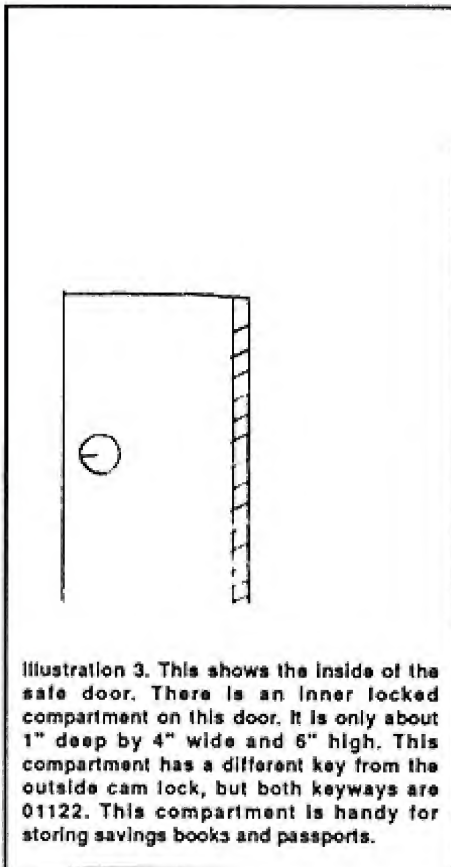


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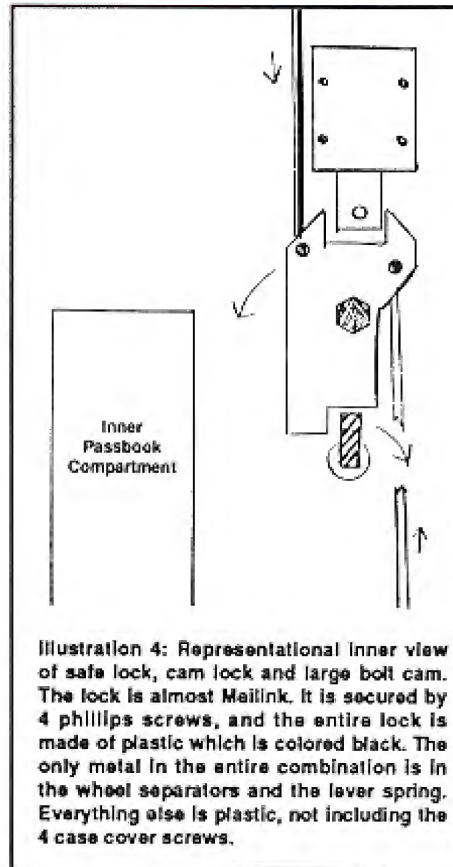
will tear and cause the wheels to drag when they should not.

As soon as I saw the first wheel spacer, I knew that I had to change to super sharp drill bits to try and minimize the drilling damage between spacers. I did, and without too many problems, the safe lock opened in about 18 minutes. If I had remembered that there might be spacers there, I would have drilled in at about 45 on the dial and would have missed the spacers entirely and the opening and repair would have been quicker and less complicated.

Once the door was open, I was surprised to see an inner door in the inside of the safe door. (See illustration 3.) This door was locked by a simple cam lock which was a different key combination than that of the front cam lock. I impressioned a key for this unit and this key also could only be removed in the locked position.

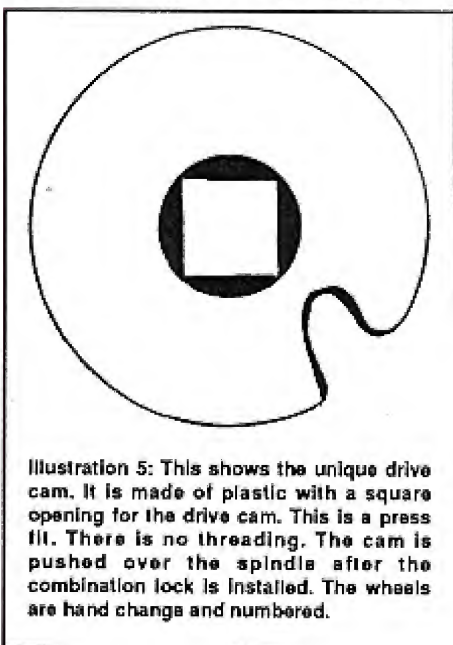
After removing the back door cover, I exposed the combination lock, cam lock, and the large cam plate. Illustration four shows a portrayal of the inside lock mechanism. Everything was about as I had expected except the combination lock itself.

The lock case was made entirely of cheap plastic. The cover was secured by four phillips screws. The wheel pack was secured to the back cover. The bolt



was extra long with a hole in it. The only metal in the lock was the lever spring, the four case and cover screws, the wheel pack retainer, and the three wheel spacers. Everything else was plastic.

Something new to me was the drive cam and the drive spindle. The spindle was square, about 1/4 inch on a side. It was not threaded. The drive cam had a square cut-out in its center. To attach the drive cam, all one has to do is push it down over the drive cam after the lock is installed. (See illustration 5.)



The wheels are hand change and numbered like standard Meilink wheels. I did not have the time to play with the cam and numbers, but I believe that no matter what the position of the drive cam, the combination would be the same; only the drop in position will be changed.

The wheels did have movable flies and very wide gates, and the third wheel did have a different plastic insert in it from the number one and two wheels. If I were guessing, I would have to say that this is a Meilink safe,

or possibly an import copy of the Meilink style with a few adaptations, like dial securing, the plastic body combination lock, and the bolt length. There were no relockers, triggers or devices.

Next time, given better positioning, lighting, and time, I would have manipulated the safe open. It is not exactly a challenge to drill a one hour fire safe. The repair is actually harder than the opening! Open and prosper. §



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The Lighter Side

'Lost' But Not Least



by Sara Probasco

Being lost is not a new experience for me. I've had lots of practice. You might even say, I've become an expert at it. I've been lost in five states, fourteen cities, one mountain, two forests, six parking lots, seven shopping malls, and a couple of supermarkets, just to hit the high points.

I started getting lost young in life, probably as a result of my older brother's influence. As instructions of, "Go west, young man," sent our pioneering ancestors in search of their destinies, so my brother's recurring admonitions of, "Get lost, Squirt," challenged my young spirit.

Although "Hansel and Gretel" tells of a wicked stepmother's attempts to get rid of the children, I always suspected that the true culprit was Hansel...that he lead his sister deep into the woods to lose her. I decided never to succumb to the temptation of being so led by anyone. I knew I could do a perfectly good job of becoming lost, all by myself, and I've spend the rest of my life proving it.

One factor which has contributed to my confidence was my penchant for day dreaming. Whenever I am alone, walking or driving a car for any distance, my mind has a tendency to wander. This makes the time pass quickly and provides food for my career as a novelist. The problem is, sometimes I "wake up" and have no idea where I am.

How strange places can seem when out of context! Taking one wrong turn can transport you to a whole new world. I have discovered neighborhoods I never knew existed, roads less traveled (usually for a reason), scenic routes uncharted on ordinary maps by less adventurous souls.

How well I remember the time I

found myself the locksmith van driving through a run-down neighborhood in a uncharted region of the city! Suddenly, a youngster ran into my path, yelling and frantically waving his arms. I stopped to see what was wrong and was told that his aged grandmother was sleeping in the locked house, and that there was a fire in the kitchen.

Leaping from my car, I quickly jimmied open the inferior lock, ran inside, and dragged the poor, startled, old woman from her bed. I had managed to pull her, kicking and screaming, out into the yard before I noticed that there was no smoke. By then, the kid (who had stolen my purse from the front seat of my car) was hot-footing it down the street with two of his buddies.

Another time, some friends and I, vacationing in the Smokey Mountains, decided to climb a foot trail to the local "Lookout Point." As usual, the directions we received from townspeople were vague, always ending with "You can't miss it." They didn't know me.

The beginning was all right. The path was clear, and the going steep but not difficult. Half-way up, everything changed. A concave bluff loomed before us, some forty feet in height.

Not to be discouraged, we started up the face of the bluff, clinging tenaciously to scraggly shrubbery and vines as we pulled ourselves aloft. We had scarcely reached the top when the sky opened and a flash flood converted our bluff to a waterfall. Obviously, there was no going back down the way we had come, so we began to look for an alternate route. That was when we spied a narrow dirt road leading around the mountain. Hopeful, we followed it, sure that we would be led back to town. Up and down, around the mountain it wound. We were alarmed to see that we were traveling farther and farther from the little village of our origin. (We later learned that the road had gone unused for decades and led to an old logging camp high in the mountains.)

To make a long story short, we trooped along that road for hours finally spotting a roof, far down the mountain-side below us. Deciding to abandon the road, we climbed down the rough terrain to the house, in hopes that someone lived there. The cabin was deserted, but fortunately for us, there was an old, dilapidated truck parked outside. I called upon my locksmith ingenuity, and in short order we were back at our hotel.

Since that time, I never go anywhere without taking along a few simple car-opening tools. I learned, from that experience, that anywhere you can find a vehicle, you can find help. All you need to do is be sure all the doors are locked and start trying to open them. Within five minutes, at least three strangers will miraculously appear, even in the most remote wilderness, offering suggestions about how to open the vehicle. Chances are, at least one of them will be able to give you a ride, or at least directions, back to civilization.

This brings us to another problem: directions. Never depend upon what the locals tell you. Each person you ask has a different opinion as to the best route back to where you thought you were in the first place, and chances are, none of them will get you there.

I believe a conspiracy exists among Chamber of Commerce members in small, remote towns to keep visitors from leaving. No doubt, you have heard horror stories about the innocent stranger, passing through some little out-of-the-way place, who stops for gas or a cup of coffee. Through a series of strange circumstances, he finds himself being subtly held prisoner by the townspeople, and he never escapes. These stories are true. I have only barely managed to slip through the fingers of such fiends on numerous occasions.

I'm not the only one in our family who gets lost. Although Don vigorously denies it, he is sometimes as confused about his whereabouts as I. Like the time

Continued on page 72

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we were attending a Locksmith meeting in the mountains near Ruidosa, New Mexico....

We had been driving along narrow, twisting roads for about an hour chit-chatting with a couple in the back seat. Finally, Don said in a jocular manner, "Which way do you think our hotel is from here?" He was grinning the way he does when he thinks he knows something nobody else does. Assuming he was playing some kind of game, we all chimed in with our opinions. Funny thing was, everybody pointed in a different direction. Don's smile faded. "Ha!" he said, renewing his lighthearted manner, "You're all wrong, it's this way." He plunged down a winding road toward the river. "That's strange," I heard a mumble. "When did the river start running upstream?" The couple in the back seat laughed, thinking he was making jokes. I could feel a panic attack coming on.

Now, there are all sorts of panic attacks, and you must be careful which one you use under any given set of circumstances. Take the "flat-out run attack," for example. An awesome maneuver when involving group participation, the technique is difficult to master when traveling in a moving vehicle or in aircraft, and can be hazardous in heavily wooded areas. However, it can prove quite effective on a beach or down an open road, if you're on foot.

Then there's the "screamin' meemees attack," which, in its ultimate

stages, can compete favorably against heavy metal rock in peeling paint off the wall or bursting event the most seasoned eardrums. This is best implemented when you are alone, as it has a tendency to make those around you a little nervous.

Personally, I prefer the "bug-eyed slobbermouth attack," especially when I am in the company of others. This is a technique I perfected several years ago in response to Don's comment of "Will you shut up?!" when I was cuing up for the "screamin' meemees" over a large water moccasin curled up on my jeans in the bottom drawer of Aunt Lillian's hope chest, down at the lake house.

So far, most of my panic attacks have either been conducted in solitude or performed solo to an appreciative audience. However, I have heard tales of group panic performances where everyone present participated. An outstanding example is the "flat-out run" a large number of hunters engaged in over in Mississippi, a few years back.

As I heard it, pranksters had faked some enormous cat tracks at a muddy river crossing near the hunters' campsite. That nigh, when the campfires began to flicker out, the practical jokesters created unearthly roaring sounds from the woods with a waxed string on an old oil drum.

Tumbling from their tents in various states of undress, the hunters assumed a mass "flat-out run" formation which cleared such a wide path through the woods, a pipe-line company decided to use it to lay an intercontinental line. §

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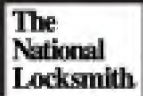
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Installing A Floor Safe

"This article will show you how I installed a small round door floor safe in a local business, and what simple tools were used."

by Robert Sleveking

Are floor safes a profitable item? Why should I sell or install floor safes? Who buys floor safes? How are they better than the discount house fireproof boxes I see in every home center and dime store? What tools do I need, and how do I install one?

Find a need and fill it. That's good advice for anyone building a new business or just trying to ride out a slow period in an established operation. By defining a need that every homeowner feels, then making the object of that need available at a reasonable price, you can make sale after profitable sale.

Protecting valuables from loss is one of the locksmith's primary calling cards, and one of the customer's major concerns. Floor safes, and home safes in general with a little salesmanship, can become a profitable add-on sale to most calls. After installing deadbolts in a home, ask your customer if he (or she) would like to see one of your new "high security" floor safes. When you recombine a small business location, ask if they have ever considered a floor safe.

Because the floor safe is buried in the ground, it has a natural fire protection advantage over most free standing safes. Because it is buried in concrete, it is much more secure than most home safes, which are commonly carried off by the burglar. Being concealed from view, the floor safe gains a new advantage, not easily achieved by other types of safes, the advantage of concealment.

With a little imagination, I'm sure you can find enough reasons for installing a floor safe to sell one to a homeowner or businessman. The first step in being a good salesman is believing in your product. Then you only have to explain the advantages to your customers. You aren't really selling them something; you're only showing them what you have to sell and how it will benefit them to buy it from

you.

I think the primary reason people don't buy floor safes, is because of the required installation. The *service* required to install a floor safe is the unique thing that you, as a locksmith, can provide. The availability of the floor safe is not critical. The K-Mart store sells floor safes. The need here, is for someone to install the things.

Very few homeowners want to tackle the job of jack-hammering a hole in a basement or garage floor. Any locksmith, with a minimum of equipment and experience, can turn this need into a very profitable part of his business. How profitable? That's up to you. Certainly, you'll present your product and service to at least ten people before the first sale is made. But why not try?

This article will show you how I installed a small round door floor safe in a local business, and what simple hand tools were used. Three hours were expended, from start to clean-up, to accomplish the installation shown here.

The building was a simple slab style metal structure, with a 4" concrete floor. After a short conversation, a location for the safe was selected in a private office. A very low traffic area, the office would allow the owner to enter the safe without the employees even having knowledge of its existence.

Because most slab style structures have a frost footing, around the perimeter of the building, which is poured before the floor, I like to stay at least 18" away from the outside walls with my hole. Illustration one shows an example of a typical footing. An alternate wide ledge footing may be found if the building has a stone or brick face, or if the building is more than one story high. Penetrating a 4" floor to install the safe, is much easier than trying to hammer through the edge of a footing.

The "safe" decision, shown in illustration two is to locate the safe at

Frost Footings!

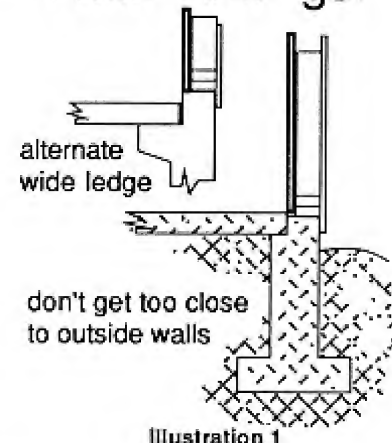


Illustration 1

The Safe Hole

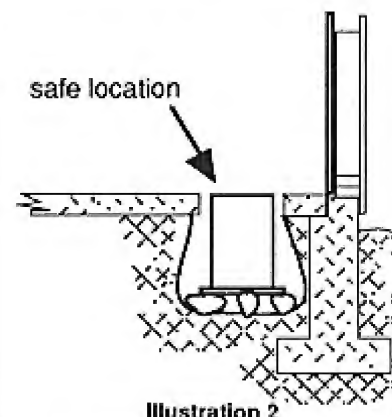
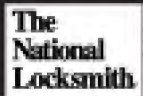


Illustration 2

least 18," but never less than 12," from an outside wall. When quoting a price for the installation, always make it clear to the customer that your price is for a 4" floor. If the concrete is deeper, or if other concrete is under the floor, the hole may become more expensive to drill.

The only tool that you will probably need to buy, is a good impact hammer. The one I use is a Chicago Pneumatic CP-715. There are a number of good hammers on the market. I haven't tried many others, but I would advise you to buy a good one and avoid learning why the less expensive hammers are less



expensive. The rating of the hammer will be in the diameter of the piston and the stroke. The larger diameter piston will have a heavier impact. For this hammer, at least a 1 horsepower air compressor is needed.

The location for the safe was agreed upon and a hole was cut in the carpet to accommodate the safe. The hole in the concrete should be a minimum of 1-1/2" larger than the diameter of the safe body. This will allow the aggregate (stones in the concrete mix) to be easily sifted into the hole, around the safe body, after the safe is blocked in place. Use a utility knife with a new blade, or razor blade type multi-purpose knife to cut the carpet. The plastic or metal lid of a five gallon pail makes a perfect size template for cutting.

After removing the carpet and pad, you are ready to begin removing the concrete. Wear "safety glasses" at all times. When operating, or watching someone else operate the air hammer, wear a "full face shield." Score the concrete, with a cold chisel. Using the air hammer, this means simply, to make a circle in the concrete to describe the size of the desired hole. Angle the air hammer slightly toward the center of the hole as you score the outline of the hole. This will prevent the concrete

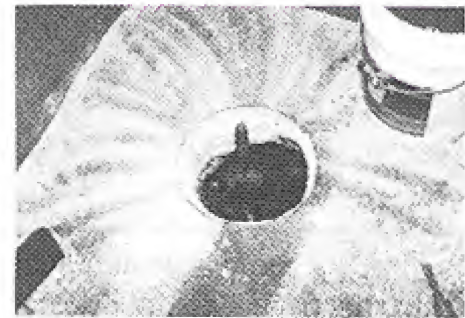


3. Scoring the hole in the concrete.

around the finished hole from being chipped away. Continue to score the line until the concrete in the center of the hole begins to chip and flake away as you see in photograph three.

The depression in the floor will begin as a rounded bottom hole. Straightening the sides of the hole, to fit the safe, is done after the hole is through the floor. The flakes of concrete fly out with considerable force, and will travel quite a distance. It is wise to erect a plastic sheet, or barrier, around your work area, for safety and to prevent the flying pieces from damaging your customer's things. A piece of carpet was blocked against the walls and file cabinet, to prevent damage to either.

In photograph four, you can see that the hole has penetrated the floor. The sides of the hole were straightened, and



4. The hole cut through the concrete and into the dirt below.

the size and shape (round) of the hole were adjusted by flaking away the sides with the air hammer. A very neat hole can be carved in the concrete if you take a little care with the air chisel. If the safe had been a square shape, or had a square plate on the bottom of the safe body, 1/2" holes would have been drilled at each corner. The holes would allow the concrete to be chipped toward the center of the hole from a nice sharp corner. An electric impact drill is well worth the investment, if you must drill.

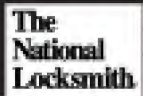
Also in photograph four, you may notice that the concrete chips are on the carpet. It would have been a good idea to use a plastic sheet or a painters tarp to prevent the dust and grit from getting into the carpet. A good vacuum is a

Continued on page 85

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Floor Safes

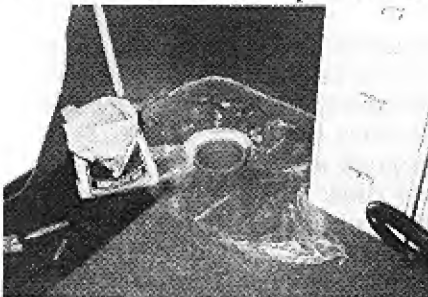
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must on this job.

Below the concrete was a layer of sand, then compacted soil. The soil and sand were removed with a garden trowel. The five gallon bucket, shown in the photo was used to carry off the debris. You should carry at least three buckets, just in case your customer doesn't have a place for the concrete chips or dirt. Save the large pieces of concrete debris, or large stones.

After digging the hole down to about one inch deeper than the depth of the safe, drop the stones in the hole and put the safe into the opening. It should be a little above the level of the floor. Lift the safe body about two or three inches and drop it into the hole to push the rocks into the soil at the bottom of the hole. You should be able to adjust the height of the safe to be exactly level with the floor. Lay a straight edge on the concrete floor, to check the height of the safe, and use wood wedges to center the safe in the hole. When you have the safe centered in the hole and level with the floor, you're ready to clean up the area and get the concrete.

In this case the carpet was vacuumed and the area was cleaned as you can see in photograph five. You can also see that only one wedge was used in this installation (just to the right of the safe body). Plastic sheeting was used to cover the white plastic safe cover and the cover used to seal the top of the safe



5. Installation area cleaned and ready for concrete

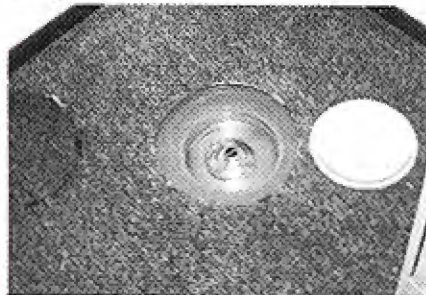
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body from water and cement. Plastic sheet material was also taped under the edge of the carpet and spread out as you see in the photo, to prevent water or cement from damaging the carpet.

The method I used to cement the safe in place, is one that I have been using to set posts and poles since I was a boy. If you try it, you will never mix concrete in a mud box again.

Use a large funnel and a bucket, to fill the hole 3/4 full of water only. (In a laundry room, garage, or basement, where a little extra water would not have been a problem, a garden hose would have been used. With the safe body plugged, sift the dry premixed concrete mix around the safe body with the garden trowel. The dry mix will fill the void around the safe, and mix on the way to the bottom of the hole. This safe required almost two bags of concrete to fill the hole.

As the hole fills with concrete, you will have to add more water. When the concrete reaches the top of the hole, strike it off with a trowel, to be level with the floor. Wait fifteen or twenty minutes to remove the plastic lid of the safe body. Then, use a wet rag to thoroughly clean the inside of the safe body. You should be able to remove the plastic and vacuum the carpet immediately. Photograph six shows the completed job. The concrete was allowed to dry as we removed all the tools to the truck. A small pointing trowel was used to smooth the concrete and give it the final touches.



6. The finished installation.

After the concrete is set, the carpet can be replaced over the hole. Use a razor knife or scissors to trim the edges of the hole and patch, as you see in photograph seven, to make the patch nearly visible. The edges of the carpet patch can be sealed with a little clear silicone, to prevent the carpet yarns from unraveling. After all the dark threads had been trimmed, the patch was undetectable.

Always demonstrate the lock and



7. Carpet is replaced over installation.

have the customer operate the combination at least twice before you leave the job. This will save you a return trip to teach them how to operate the lock. I do not leave a change key with a customer. It is not part of the safe, and will only cause you grief if you give it away. §

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